65-3192

BATTLE CREEK

State Highway Plan

Planning Division, Office of Planning
Michigan Department of State Highways

65-319

STATE OF MICHIGAN

GEORGE ROMNEY, GOVERNOR

DEPARTMENT OF STATE HIGHWAYS

STEVENS T. MASON BLDG.
LANSING, MICHIGAN 48926

June 10, 1966

Mr. E. A. Bellenbaum
Chief Planning Engineer
Office of Planning

Dear Mr. Bellenbaum:

The Planning Division of the Office of Planning respectfully submits the "Battle Creek State Highway Plan." This plan is based upon the latest information available to the Department of State Highways. It includes inventory, forecast and analysis of data pertaining to economics, population, land use, community facilities, community development, transportation and traffic. Recommendations for highway improvements in the Battle Creek area are based upon an objective investigation of these community components as they relate to present and future highway needs.

This study has been made possible through the cooperative efforts of representatives of several divisions of the Michigan Department of State Highways, the Battle Creek City Commission and Planning Commission, and other officials of Battle Creek, Springfield, Calhoun County, and the townships affected by the recommended alignments. The study was prepared in participation with the Bureau of Public Roads of the United States Department of Commerce. Based upon extensive analysis of the area, it represents the level of agreement between the Michigan Department of State Highways and local officials concerning a future highway system for the Battle Creek area. The recommended projects may now be submitted to the Programming and Route Location Divisions for implementation.

Sincerely,

Robert S. Boatman

Robert S. Boatman, Director
Planning Division
Office of Planning

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Battle Creek is the regional trade center for Calhoun County and parts of Kalamazoo, Barry, Eaton and Branch Counties. Located in the Detroit-to-Chicago industrial corridor, it has the available land and economic potential for industrial growth and accompanying population increase. However, past trends indicate that the Battle Creek area has been losing basic manufacturing jobs since 1953. An increase in nonmanufacturing employment has helped to take up the slack and keep the number of unemployed at a reasonable level. The number of new positions that can be created in nonmanufacturing is limited, however, by the extent to which they can be supported by basic manufacturing employment. Unless some unforeseen employment opportunities develop in the Battle Creek area, such as an increase in government jobs or the establishment of a major university, nonmanufacturing enterprises can be assumed to be reaching a point where supply meets demand and new employment in this category will probably level off.

The resultant effect on the Battle Creek area is that population may continue to rise as a result of natural increase (surplus of births over deaths), but high rates of migration into the area are not expected. The qualitative characteristics of population growth, combined with a valid quantitative estimate of future population, is of vital importance to a highway plan.

Future land use distribution in the Battle Creek area is expected to follow the present patterns of land development. Industrial uses will probably continue to develop in the east-west industrial corridor along the Battle Creek and Kalamazoo Rivers and the railroad tracks, including reuse areas in the Jewel Street Redevelopment Project. Industry is also expected to locate in a proposed industrial park west of Kellogg Airfield, adjacent to the new alignment of I-94BL.

Commercial uses should continue to concentrate in the central business district. However, new regional and area shopping centers will probably develop along major thoroughfares and where major streets interchange with I-94.

The largest increase in home building is expected to occur in Battle Creek Township, around Goguac Lake and adjacent to I-194. The second most significant area of future residential building is expected to be between St. Mary's Lake and the north city limit of Battle Creek. The predominant type of construction in these areas will probably be single-family homes. Multiple-family dwellings are expected within the City of Battle Creek, close to the central business district and in proximity to other shopping areas in the city.

The 1961 origin and destination study, conducted by the Michigan Department of State Highways, shows that the principal zone of attraction for trips having an origin or destination outside the traffic study area is the central business district. The second most attractive zone includes the Kellogg Company plant on Porter Street. The zones containing the Post Cereals, Sears-Roebuck, Ralston Purina, Clark Equipment and Eaton Manufacturing firms are also strong attractors. Other important zones are the mixed industrial and commercial areas surrounding the central business district. The zones cited above attract approximately 40 percent of the terminal traffic entering the traffic study area. The remaining 60 percent of terminal traffic is scattered throughout the remaining zones of the area.

All of the above information has been carefully studied in relation to effects on highway needs. As a result, fiscally reasonable recommendations have been prepared for a highway system that will accommodate present and anticipated transportation requirements of the Battle Creek area.

Recommendations

The recommended state highway system for the Battle Creek area is shown on Figure 18, and is described as follows:

M-37

This route is planned to be combined with M-43 to form one major facility between Hastings and the Battle Creek–Kalamazoo area.

I-94

This new route would retain its present role as an Interstate highway, but it will be used more intensively as it becomes completely integrated with the state and local road systems.

I-194

This penetrator route into the city would be completed and provide access into the business section and connect with the other highway components.

M-66

This route, approaching Battle Creek from the south, would dual with I-194 through the Millpond, pass through the central business district on Division Street to its junction with Capital Avenue, and proceed north on the Capital Avenue alignment. Division Street, from Fountain Street to Capital Avenue, and Capital Avenue, from Division Street north, would operate as two-way streets.

I-94 BL

This route enters the city from the east on Michigan Avenue, would turn onto Columbia Avenue, follow Cliff Street to the vicinity of Jericho Road, proceed northwesterly to Hall Street and then to the Millpond interchange. From the Millpond, the route proceeds westerly through the urban renewal area on the Dickman Road axis, to a point just west of the Grand Trunk Western Railway, then proceeds southwesterly on a new alignment to Columbia Avenue and south to I-94.

M-89

This route approaches the city from the west. The proposed combining of M-43 and M-37, and the subsequent joining of these routes with I-94 BL via a southern connection through Fort Custer would permit the turnback of M-89 to local governmental jurisdictions. In addition, the proposals in this area would permit turnbacks of present state highways located on portions of; Michigan Avenue east of the Calhoun County line, Jackson and Van Buren Streets, and Bedford Road.

The Cities of Battle Creek and Springfield concur with the State Highway Plan as presented herein, with the exception of that portion of I-94 BL from the eastern terminus of Hall Street easterly to Columbia Avenue. In addition to its existing alignment on Michigan Avenue, two feasible alternatives generally known as the Cliff Street and Porter Street alternatives, lie within this traffic corridor. (See Figure 18) The City of Battle Creek and the Department of State Highways have expended considerable effort studying these alternatives in the last two years. Agreement on which alternative to implement, however, has not been reached. The City of Battle Creek recommends using the Porter Street alternative. This report recommends that the Cliff Street alternative be used for the I-94 BL alignment. Without the mutual concurrence of the City of Battle Creek and the Michigan Department of State Highways, neither recommendation can be implemented. Therefore, it is further recommended that the present routing of I-94 BL on Michigan Avenue be retained until such time as a cooperative agreement can be obtained.

Preface

Agreement between community officials and the Michigan Department of State Highways on the elements of an urban state highway plan is a requirement that must precede any major state highway construction. This policy has been established by the Michigan Department of State Highways. It is the responsibility of the Office of Planning, Department of State Highways, to do state highway planning for urban and rural areas. In accordance with this policy, the Planning Division of the Office of Planning, in cooperation with the governmental units involved, has prepared a comprehensive state highway plan for the Battle Creek area.

Cities are influenced by many interrelated economic and social conditions which account for their size and general characteristics.

These same conditions also affect a community's future growth patterns. A thorough understanding of the historical trends that have influenced the past growth of Battle Creek is a necessary preliminary step in developing a meaningful highway plan for the community.

The settlement and subsequent growth of a small village into a large complex city is not the result of chance alone. Factors such as transportation, terrain, power, climate, raw materials, industry, foresight of the populace and the economic level of the surrounding country account for a city's size, growth and vitality.

A system of existing or proposed highways exerts a strong influence upon development of surrounding land uses and, consequently, upon a city as an entity. Transportation routes direct the physical pattern of population growth. In Battle Creek, the original settlement grew on an east-west axis along the Battle Creek and Kalamazoo Rivers. As other transportation routes leading to focal points in the region or state were opened, community growth patterns were altered.

Vitality in commerce and industry is of paramount importance for growth of a city. Without industry, it is difficult for a city to expand and population growth is stifled. The city, less able to compete with other communities in the region, begins to lose its share of the regional market. More industry and commerce is lost and the downward economic trend is accelerated.

One way for a community to contribute to the vitality of the area and protect itself against economic decline is to obtain a safe, adequate and convenient major street system. With a system of major streets tied into state highways that provide easy access to other parts of the region or state, a city is in a good position to retain its existing industry and attract new firms.

In this report, pertinent material available on the above factors and conditions has been analyzed. This involved determination of the adequacy of existing traffic routes and resulted in the selection of the most feasible solution to alleviate congestion due to inadequate highways in and near the city.

The objectives of the Department of State Highways in formulating a highway plan are to:

a. Create a highway system that is compatible with community objectives and the needs of the state
b. Improve highway service for the community
c. Improve the economic potential of the area
d. Advance better statewide and nationwide highway service

Introduction

Traffic is increasing rapidly throughout the nation and the City of Battle Creek is no exception to this trend. A tremendous increase in the use of urban streets has occurred during the past decade and traffic congestion, instead of being an occasional problem, has become an expected condition. Drastic changes in living habits and modes of transportation have contributed to obstruction of traffic on streets that formerly were adequate. Automobiles are used extensively, while mass transit is employed primarily to relieve peak hour traffic loads in the larger metropolitan areas. The ever-increasing movement of goods by trucks is adding more traffic to already crowded streets.

The state highway system in Battle Creek is plagued with operational problems and is becoming increasingly inadequate for serving existing needs or for complementing and encouraging future development. If the area is to grow and prosper, comprehensive highway plans for solving these problems must be de-developed and implemented.

The purposes of this report are to furnish a broad survey of the basic planning determinants involved in the solution of highway network inadequacies, impart various alternative solutions for the rectification of traffic problems, and recommend one alternative system as the optimum solution for satisfying state highway

system needs in the Battle Creek area.

The reasons for collection, analysis and synthesis of various types of data pertinent to highway planning are as follows:

ECONOMIC

Provides a foundation upon which to project population and evaluate future physical development and transportation requirements of the city.

POPULATION

Provides basic information upon which the size and location of past, present and future residential areas are determined. Assists in revealing what future highway improvements will be necessary to serve the projected population and related land uses.

LAND USE

Provides both visual and statistical aids to determine the routing of highways to serve major industrial and commercial traffic generators, and to minimize damage to established and planned neighborhoods and structures.

TRAFFIC

Provides information necessary to determine present and future volumes, types, origins and destinations of vehicles, and the streets that carry the highest volumes of traffic.

Other considerations in the plan include intracity, rural, state and interstate highway connections; other transportation facilities, community facilities, and community development and expansion objectives; school attendance areas; and a logical sequence of major street connections and improvements.

Economics

ECONOMICS

Battle Creek is located along Interstate 94, approximately midway between Detroit and Chicago. It is influenced by four metropolitan areas: Kalamazoo, 24 miles to the west; Jackson, 42 miles to the east; Lansing, 46 miles northeast; and Grand Rapids, 60 miles to the north (see Figure 1). The Battle Creek area, for the purposes of this report, consists of Battle Creek, Bedford, Emmett, and Pennfield Townships and the Cities of Battle Creek and Springfield.

The development of cities like Battle Creek has not been based upon mere chance. Various factors, such as topography, availability of water and power, and transportation facilities, determine the size and vitality of a community.

The junction of the Kalamazoo and Battle Creek river valleys created a natural town site for Battle Creek. The availability of water power at this point led to the settling of the area. Battle Creek is connected to nearby cities and other metropolitan areas by a network of highways that generally follow the stream valleys used for early communication routes.

Industry was attracted to the Battle Creek area through the use of millraces on the Kalamazoo and Battle Creek Rivers. At one time, eighteen industries were dependent upon the millraces for power. The advent of steam and electrical power made these millraces obsolete.

The early arrival of rail transportation also was an important factor in Battle Creek's industrial development. Farm implement manufacturing was the first industry to locate in Battle Creek, followed by firms producing printing presses, steam pumps and cereals. All of these were highly dependent on rail transportation for receiving raw materials and shipping finished products.

The cereal industry is the largest of the surviving original industries, with two firms furnishing a large percentage of total Battle Creek area employment.

Economic Trends

Employment

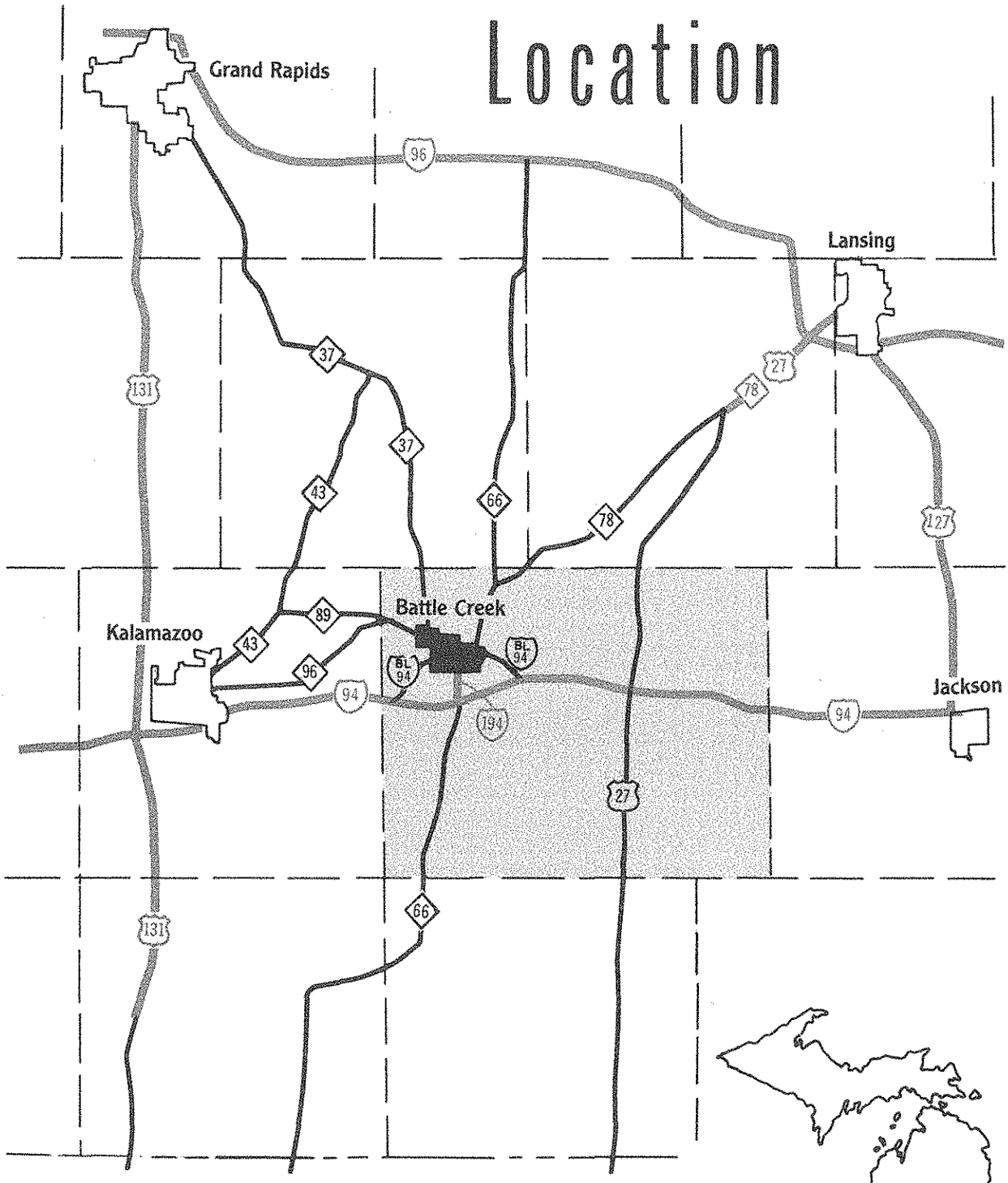
Cities such as Battle Creek exist primarily as centers of employment. Generally, the more diversification in employment opportunities, the more stable the growth and economy of the area will be.

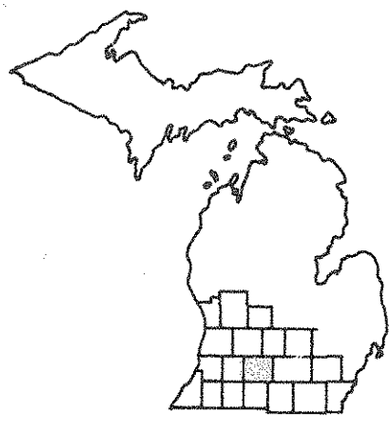
Employment, as reported by the United States Department of Commerce, Bureau of the Census, is shown by Table 1 for Battle Creek and Calhoun County. The total labor force of Calhoun County residents increased 44.4 percent between 1940 and 1960, while the population increased 47.4 percent during the same period. The Battle Creek labor force declined by 2.9 percent during the 1940–60 period, while the city population increased by 1.6 percent.

Three major employment groups furnished jobs to 69.8 percent of the Battle Creek resident labor force in 1940 (see Table 2). These groups were manufacturing, with 32.7 percent; wholesale and retail trade, with 15.1 percent; and services, with 22.0 percent. By 1960, these groups had increased their share of the Battle Creek resident labor force to 72.5 percent, with manufacturing employment declining to 29.3 percent, services employment rising to 28.2 percent, and wholesale and retail trade declining slightly to 15.0 percent.

The number of Battle Creek residents employed in manufacturing declined by 800 during the 1940–60 period. Much of this decline can be attributed to the phasing out of large-scale nonelectrical machinery manufacturing, and the lack of increased employment opportunities

Regional Location





KEY MAP

FIGURE I

in food products manufacturing. The latter furnished employment to 42.5 percent of the Battle Creek resident manufacturing employment in 1940 and remains the largest single manufacturing industry, since it provided 45.6 percent of Battle Creek resident manufacturing employment in 1960.

should also be noted that there are a large number of Battle Creek residents employed in hospitals. In 1960, the number of Battle Creek residents employed in hospitals constituted more than 25 percent of total services employment.

Table 1

RESIDENT EMPLOYMENT TRENDS

	CALHOUN COUNTY						BATTLE CREEK					
Group	1940	1950	'40–'50 % Change	1960	'50–'60 % Change	'40–'60 % Change	1940	1950	'40–'50 % Change	1960	'50–'60% Change	'40–'60 % Change
Total Civilian Labor Force	37,664	47,202	25.3	54,385	15.2	44.4	19,018	21,503	13.1	18,472	–14.1	– 2.9
Unemployment	2,943	2,209	–24.9	3,322	50.4	12.9	1,816	1,072	–41.0	1,373	28.1	–24.4
Employment	34,721	44,993	29.6	51,063	13.5	47.1	17,202	20,431	18.8	17,099	–16.3	– 0.6
Construction	1,211	1,974	63.0	2,130	7.9	75.9	537	819	52.5	774	– 5.5	44.1
Manufacturing	11,889	17,495	47.2	18,591	6.3	56.4	6,215	7,748	24.7	5,415	–30.1	–12.9
Food Products	4,154	6,346	52.8	6,296	–0.8	51.6	2,642	3,406	28.9	2,468	–27.5	– 6.6
Trans., Communications & Utilities	2,526	3,145	24.5	2,811	–10.6	11.3	1,641	1,734	5.7	1,103	–36.4	–32.8
Wholesale & Retail Trade	4,938	7,484	51.6	8,519	13.8	72.5	2,865	3,783	32.0	2,768	–26.8	– 3.4
Services	7,120	10,102	41.9	12,772	26.4	79.4	4,191	5,373	28.2	5,217	– 2.9	24.5
Public Admin.	773	1,407	82.0	2,457	74.6	217.9	436	747	71.3	1,079	44.4	147.5
Other*	6,264	3,386	–45.9	3,783	11.7	–39.6	1,317	227	–82.8	795	250.2	–39.6
Total Civilian as % of Population	36.9	37.2		36.8			39.6	42.0		38.7		

SOURCE: United States Department of Commerce, Bureau of the Census

* OTHER includes agriculture, forestry, fishery, mining and not reported for all years, and public emergency workers for 1940 only.

The large increase in services employment relative to Battle Creek residents between 1940 and 1960 can be attributed partially to the nationally rising standard of living, which results in demand for additional services. It

Unemployment rates for Battle Creek and Calhoun County residents compare favorably with those for Michigan residents, with Battle Creek being slightly higher than Michigan and Calhoun County's rate slightly below the state figure in 1960.

Manufacturing remains the basic industry for employment of both Battle Creek and Calhoun County residents. The lack of growth in manufacturing since 1950 will have to be reversed if total employment is to rise. Recent increases in services employment cannot be expected to continue as in the past if there is no growth in manufacturing employment. The recent expansion of services employment is due to the satisfying of previously established demand. Employment in hospital services is not likely to maintain the growth it has had during the past decade because current Federal government policy is to not expand veterans' hospitals. employment, residents will be forced to move to where they can find work, resulting in a smaller labor force and population for both Calhoun County and Battle Creek.

With the above discussion of current employment trends in mind, projections of the labor force and the population it can sustain can be made.

Projections of resident employment for both Battle Creek and Calhoun County have been made by the Planning Division of the Michigan Department of State Highways. A comparison

Table 2 DISTRIBUTION OF RESIDENT EMPLOYMENT

	CALHOUN COUNTY			BATTLE CREEK		
Group	1940	1950	1960	1940	1950	1960
Total Civilian Labor Force	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Unemployment	7.81	4.68	6.11	9.55	4.99	7.43
Employment	92.19	95.32	93.89	90.45	95.01	92.57
Construction	3.22	4.18	3.92	2.82	3.81	4.19
Manufacturing	31.57	37.06	34.18	32.68	36.03	29.31
Food Products	11.03	13.44	11.58	13.89	15.84	13.36
Transportation, Comm. & Utilities	6.71	6.66	5.17	8.63	8.06	5.97
Wholesale and Retail Trade	13.11	15.86	15.66	15.06	17.60	14.98
Services	18.90	21.40	23.48	22.04	24.98	28.24
Public Administration	2.05	2.98	4.52	2.29	3.47	5.84
Other	16.63	7.17	6.95	6.93	1.06	4.02

SOURCE: Table 1

The availability of employment opportunities in Battle Creek, Calhoun County and nearby metropolitan centers such as Kalamazoo will directly determine the size of the 1980 Battle Creek labor force. Without opportunities for indicates that Battle Creek's resident employment is expected to increase 5.8 percent between 1960 and 1980. Calhoun County's resident employment, is anticipated to increase by 33.3 percent during the same period.

One method of projecting future population is based on the relationship between employment and total population. Table 3 indicates the relationship between resident employment and population for the year 1960 and projected to 1980. Based upon past trends, Battle Creek will have 38.8 persons employed for every 100 residents in 1980 and Calhoun County will show approximately 35.6. These ratios, together with the projected resident employment indicate that Calhoun County will have a population of 191,300 in 1980 and Battle Creek will have a population of 46,700.

Michigan, while its population was only 0.76 percent of the total Michigan population. Battle Creek's relative share of total retail sales in Calhoun County during the same year was 65.8 percent, while its population was 40.3 percent.

Even though Battle Creek's population as a percent of Michigan's declined considerably to 0.57 percent by 1960, its relative retail sales decreased only slightly to 1.12 percent. Battle Creek's share of total retail sales in Calhoun County decreased to 62.4 percent, and its proportion of the county population declined to 31.8 percent.

Table 3 **RESIDENT EMPLOYMENT PROJECTIONS**

	CALHOUN COUNTY			BATTLE CREEK		
	1960	1970	1980	1960	1970	1980
Total Civilian Employment	51,063	59,900	68,100	17,099	18,100	18,100
TCE as % of Population	36.8	36.1	35.6	38.7	39.2	38.8
Population	138,858	166,200	191,300	44,169	46,200	46,700

SOURCE: Planning Division, Michigan Department of State Highways.

Other important components of the Battle Creek economic picture are trends in retail sales and disposable income. The general trading area of Battle Creek is somewhat narrowed because of the proximity of other metropolitan areas. Battle Creek remains a regional trade center and dominates commercial activities in Calhoun County.

Comparable income and retail sales figures for Battle Creek, Calhoun County and Michigan are shown in Table 4. Retail sales in Battle Creek are considerably higher than might be anticipated from its relative share of Michigan's population. In 1950, Battle Creek's retail sales represented 1.21 percent of all retail sales in

Economic growth is also reflected by trends in disposable income. This is defined as income after taxes. Although Calhoun County has shown considerable growth in total disposable income in the 1950–64 period, the City of Battle Creek has not been able to hold its own. In 1950, Battle Creek residents received 0.90 percent of all disposable income in Michigan, while its population was only 0.76 percent. By 1960, Battle Creek's population was 0.57 percent of Michigan's and disposable income received by the city's residents declined to 0.64 and to 0.56 by 1964.

Disposable income received by Calhoun County residents declined from 1.84 percent of Michigan's in 1950, to 1.80 percent in 1960, but increased slightly to 1.81 by 1964. During the same period, Calhoun County population, as a percent of Michigan's, declined from 1.90 percent to 1.72 percent.

latter. These figures represent 1960 to 1980 increases of 12.0 percent and 23.7 percent, respectively.

Total disposable income received by Calhoun County and Battle Creek residents in 1980, based on past trends in per capita income and

Table 4

COMPARATIVE MARKETING DATA
(Add 000 to all dollar amounts)

Year	Michigan	Battle Creek	Calhoun County	Battle Creek as % of Michigan	Battle Creek as % of County
TOTAL RETAIL SALES					
1950	$8,075,411	$ 98,011	$148,865	1.21	65.84
1952	8,203,397	113,120	171,814	1.38	65.84
1954	8,844,449	108,570	168,104	1.23	64.59
1956	9,671,267	101,514	163,297	1.05	62.17
1958	8,968,663	99,367	155,490	1.11	63.91
1960	9,685,573	108,830	174,433	1.12	62.39
1962	9,820,749	106,117	168,849	1.08	62.85
1964	10,783,743	115,794	185,688	1.07	62.36
TOTAL DISPOSABLE INCOME					
1950	$11,282,329	$101,942	$202,811	0.90	50.26
1952	11,268,757	90,640	203,281	0.80	44.59
1954	12,728,407	100,669	232,556	0.79	43.29
1956	14,260,258	107,580	256,094	0.75	42.01
1958	14,187,170	103,531	246,570	0.73	41.99
1960	16,054,192	102,858	264,379	0.64	38.91
1962	16,099,594	100,704	290,430	0.63	34.67
1964	18,025,434	101,566	326,219	0.56	31.13

All dollar amounts have been adjusted by the relative value of the dollar for each particular year using the Consumer Price Index, Base Year 1957–59.

SOURCE: Sales Management Magazine, Survey of Buying Power. Copyright 1951, 1953, 1955, 1957, 1959, 1961, 1963 and 1965. Further reproduction is forbidden.

Projections of disposable income for Battle Creek and Calhoun County residents indicate that, by 1980, per capita disposable income will be $2,384 for the former and $2,334 for the population*, is expected to be nearly 111 million dollars in Battle Creek and over 446 million dollars in all of Calhoun County.

* Battle Creek is expected to have 46,700 residents based on existing political boundaries and Calhoun County 191,300 in 1980.

Economic Conclusions

The study of urban economics provides indicators of vitality of the area and a basis for estimating future growth potentialities of population, industry, commerce and residential development. The land control policies of the area guide the location of future land development, but economics will determine its feasibility. An industry requiring employees with a high degree of skill will not locate in an area with a predominantly unskilled labor force, nor will people migrate to an area where few employment opportunities exist. Basic employment, defined loosely as those employed positions in firms that dispose of their products outside the immediate area, are a stabilizing influence on the area's economy. These "basic" jobs bring "new" money into the area that supports nonbasic employment, i.e., retail, wholesale, and the multitude of service positions, such as local government and professional.

Battle Creek is the regional trade center for Calhoun County and parts of Kalamazoo, Barry, Eaton and Branch Counties. Located in the Detroit to Chicago industrial corridor, it has available land and potential for industrial growth and accompanying population increases. However, past trends indicate that the Battle Creek area has been losing basic manufacturing jobs since 1950. Stability in services and trade employment has taken up the slack and kept the number of unemployed to a reasonable level. However, the number of new positions that can be created in these fields is limited to the extent that they can be supported by basic manufacturing employment. Employment can only increase in service/trade enterprises as regional demand for their products or services increases. Unless some unforeseen employment opportunities develop in the Battle Creek area, such as an increase in government jobs or the establishment of a major university, nonmanufacturing enterprises can be assumed to be reaching a point where supply meets demand and new employment in this category will level off. The resultant effect on the Battle Creek area is that unless new employment in services or manufacturing occurs, population may continue to rise as a result of natural increase (birth over deaths), but high rates of migration into the area are not expected to occur.

Population

POPULATION

Past Growth Trends

It is vital to understand a community's population trends, if reasonable estimates of future traffic needs are to be made. Ignoring population characteristics may lead to construction of highways that are obsolete before they are completed. A lack of analysis of population growth rates may result in a highway system that is overloaded many years before its practical life has been expended. Limited knowledge of the directions in which population growth is occurring may result in poorly located highway facilities.

Finally, population estimates for at least twenty years should be made so that construction and improvement of highways can be staged commensurately with increasing growth and be accomplished in a way that will permit additional expansion to serve ultimate needs. Since it is not possible to project population too far

Table 5 BATTLE CREEK AREA POPULATION TRENDS

Area	1940	1950	'40 – '50 % Change	1960	'50 – '60 % Change	'40 – '60 % Change
City of Battle Creek	43,453	48,666	12.0	44,169*	–9.2	1.6
City of Springfield	---	---	--	4,605*	--	--
Battle Creek Twp.	7,844	15,105	92.6	19,010*	25.9	142.4
Bedford Twp.	4,219	9,213	118.4	10,486*	13.8	148.5
Emmet Twp.	4,995	7,362	47.4	9,087*	23.4	81.9
Pennfield Twp.	3,326	4,144	24.6	6,626*	59.9	99.2
Battle Creek Area	63,827	84,490	32.4	93,983	11.2	47.2
Calhoun County	94,206	120,813	28.2	138,858	14.9	47.4
State of Michigan	5,256,106	6,371,766	21.2	7,823,194	22.8	48.8

SOURCE: United States Department of Commerce, Bureau of the Census

*Parts of Bedford, Pennfield and Emmett Townships annexed to City of Battle Creek, and City of Springfield incorporated from part of Battle Creek Township between 1950 and 1960.

into the future with any degree of accuracy, periodical reevaluation of the highway system must be made to permit adjustment to new trends. This continuing planning process will enable the Department of State Highways and the Battle Creek area to adjust the scheduling of highway improvements as required by changing economic conditions and resultant population growth.

Population expansion in Calhoun County compared to growth in the State of Michigan indicates that Calhoun County has not kept pace. In 1940, the County population of 94,206 represented 1.79 percent of the Michigan population. The 1950 Calhoun County population of 120,813 represented 1.90 percent of the Michigan population. However, during the 1950 to 1960 period, Calhoun County's population did not increase as fast as Michigan's, with the result that Calhoun County population as a percent of Michigan declined to 1.78 percent.

Population trends since 1940, for the governmental units comprising the Battle Creek area, as shown by Table 5, show that the area surrounding the city has had a much more rapid rate of growth than the city. In 1940, the population of the City of Battle Creek comprised 68.1 percent of the Battle Creek area's population of 63,837. By 1960, the city's population was only 47.0 percent of the area's 93,983 inhabitants.

Battle Creek's population decline of 9.2 percent between 1950 and 1960 was the only loss experienced by any governmental unit in the Battle Creek area. In an indirect way, this population loss was probably partially due to a reduction in the number of armed forces personnel stationed at Fort Custer. Other contributing factors were; the loss of Oliver Corp., urban renewal action, highway construction programs, and a decrease in the number of employees at the Federal Center.

The position of the Battle Creek area is somewhat better than that of Battle Creek. The population of the total area, including the City of Battle Creek, has continued to increase every decade since 1890 and, with the exception of the 1950 to 1960 period, appears to be accelerating. In 1890, the Battle Creek area population, as a percent of Calhoun County population, was 39.6 percent. By 1960, the area's population, as a percent of Calhoun County, had risen to 67.7 percent.

Comparative Growth

Although Battle Creek does not have a population of 50,000 and, therefore, is not a Standard Metropolitan Statistical Area (SMSA), as defined by the Federal Bureau of the Budget, it has many of the economic and social functions peculiar to SMSA's. For this reason, Table 7 compares Battle Creek with averages of selected Michigan SMSA's. All three comparisons in Table 6 show that Battle Creek and Calhoun County exhibit substantially lower growth rates than the average for SMSA's in Michigan. This slower growth is partially due to the slow increase in total employment, the population loss from the reduction of military personnel at Fort Custer, and the competition exerted by metropolitan centers in proximity to Battle Creek. Calhoun County's growth rate is approximately one-half that of the average SMSA in Michigan.

Table 6

PERCENT POPULATION CHANGE 1950–60
CALHOUN COUNTY AND MICHIGAN SMSA's *

Area	Percent Change
All SMSA's (average)	27.5
Calhoun County	14.9
SMSA Central Cities (average)	12.3
Battle Creek	-9.0
Outside SMSA Central Cities (average)	44.0
Outside Battle Creek	23.8

* To avoid distortion, the Detroit SMSA is not used

SOURCE: United States Department of Commerce Bureau of the Census

Population Projections

Projections of population for Battle Creek, the Battle Creek area and Calhoun County are shown in Table 7 and were made in the following manner:

A Projections – Rate of increase between 1930 and 1960 projected to 1980

B Projections – Net changes due to migration, births and deaths between 1940 and 1960, projected to 1980

C Projections – Employment to population ratio between 1940 and 1960 projected to 1980

Projections for Battle Creek reflect current conditions in the area. If local authorities are successful in efforts to attract new industry and commerce, these projections will be low. Battle Creek projections are based on the assumption that the area comprising the city in 1980 will be the same as in 1960. If annexation does occur, projections will have to be adjusted accordingly.

Table 7 **POPULATION PROJECTIONS**

	Calhoun County		Battle Creek Area		Battle Creek	
	1970	1980	1970	1980	1970	1980
A Projection *	155,800	173,900	106,500	118,900	47,900	53,500
B Projection *	145,400	156,700	99,400	107,100	44,800	48,200
C Projection	166,200	191,300	113,600	130,700	46,200	46,700

SOURCE: Planning Division, Michigan Department of State Highways.

* Projection for Battle Creek is based on the assumption that the city will be 45 percent of the Battle Creek area in 1970 and 1980

With all three projections, the Battle Creek area population was projected on the basis of its ratio to the Calhoun County population. It is expected that the 1980 Battle Creek area population will constitute 68.34 percent of the county population, compared to 67.68 percent in 1960.

Battle Creek area population projections for 1980 range from a low of 107,100 to a high of 130,700. The low is based on the assumption that migration into and out of Calhoun County will be negligible. The high projection reflects the influence of nearby metropolitan areas as it assumes that residents of the area seeking employment will be able to find work within reasonable driving distance.

Automobile Registrations

Analysis of auto registrations provides indications of the effects of a growing and more affluent population on future transportation requirements. Auto registrations in Calhoun County, as well as in most other metropolitan areas in Michigan, have increased at a faster rate than have new family formations. One reason for this is that more families are obtaining second or third cars.

Despite yearly fluctuations in auto registrations between 1940 and 1960, there has been a steady increase within Calhoun County. In 1940, there were 27,606 private automobiles registered in Calhoun County. By 1960, registrations had increased to 53,600; an increase of 94.2 percent. There were 293 passenger cars per 1,000 residents in 1940 and 386 in 1960. If this increase in passenger cars per 1,000 residents continues, and if Calhoun County retains its present relationship to the Michigan passenger car ownership, Calhoun County will have an estimated 89,100 autos registered by 1980. This would represent an increase of 66.2 percent over 1960 (see Table 8). On the basis of population projection "C" for 1980 (191,300), Calhoun County would have 466 automobiles for every 1,000 residents.

Table 8

AUTOMOBILE REGISTRATIONS AND POPULATION

Year	Michigan Autos	Michigan Passenger Cars Per 1,000 Residents	Calhoun County Autos	Calhoun County Passenger Cars Per 1,000 Residents
1940	1,399,826	267	27,606	293
1950	2,110,636	332	39,550	327
1960	2,875,758	368	53,600	386
1980	4,992,013	446	89,100	466

SOURCE: Historical data from Michigan Secretary of State, projection for Michigan from Programming Division, Calhoun County projections estimated by Planning Division, Michigan Department of State Highways.

Direction of Growth

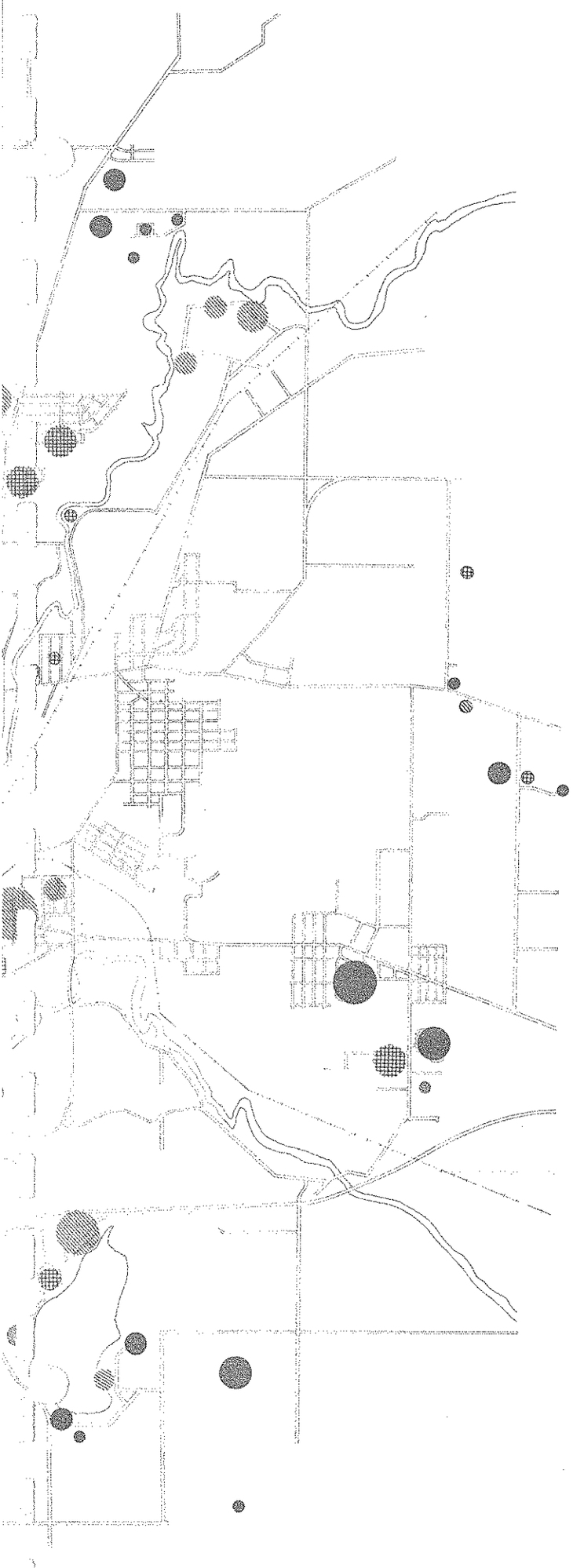
Population of the Township of Battle Creek, including the City of Springfield, grew by 8,510 (56.3 percent) from 1950 to 1960. This was the largest increase for any portion of the study area. Pennfield Township was the second fastest growing area with an increase of 2,482 (59.9 percent) during the same decade. Emmet and Bedford Townships were third and fourth respectively.

Figure 2, showing subdivision plats recorded since 1930, indicates that new population settlement is taking place around Goguac Lake and adjacent to I-194. North of Battle Creek, the population growth is taking place between St. Mary's Lake and the north city limits. A third area of population growth is along M-96 (Michigan Avenue), northwest of the city.

There have been several directional shifts of subdivision trends in Battle Creek Township. From the late 1950's to the present, the high growth area appears to be to the south of Battle Creek. However, more lots have been platted to the north of the city than to the south, even though there are more but smaller subdivisions to the south. The area to the northwest has dropped off slightly in platting of new lots in recent years. Since all lots in any one subdivision may not be built upon, these plats are only a rough indicator of residential development patterns. Generally, however, these subdivision trends are valid when used concurrently with other indices.

Directional trends of population growth, combined with a valid quantitative estimate of future population, are of vital importance to a highway plan. New residential development, by itself, has relatively little effect upon the arterial street system. It is the collective number of trips and the attendant traffic generators that inevitably follow residential construction, such as commercial development, service enterprises, and recreational facilities, that overload the existing street system and create new patterns of traffic that must be analyzed and correlated with future highway proposals.

Areas of potential industrial as well as residential and commercial expansion must be considered in the plan even though the outlook for expansion may be poor. In many instances, new highways have encouraged industrial activity in proximity to their alignments. An attempt must be made to anticipate this activity and provide for it if the highway is to function as intended.



BATTLE CREEK AREA

SUBDIVISION TRENDS

1930 - 1962

LEGEND

- 1930 - 1939
- 1940 - 1949
- 1950 - 1954
- 1955 - 1962

NUMBER OF LOTS

- 0 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 101 +

Prepared by the Planning Division
Michigan Department of State Highways

SOURCE: Michigan Auditor General's Office

FIGURE 2

Land Use

LAND USE

Urban land uses and urban highways are so closely related and dependent upon one another that it is impossible to consider them separately. As a highway facility traverses an area, its alignment and capacity are directly influenced by the land uses it serves. Conversely, a highway facility will engender the development of land in proximity to its alignment. In addition, a new highway, or an existing one upgraded, may cause the land uses that it passes to change in character, i.e., residential to commercial, vacant to industrial, etc. Because of these interactions, a highway plan must include an analysis of the existing land use patterns in any attempt to forecast future land use and the effects of proposed highway alignments.

Existing Land Use

As with most cities of similar size and age, Battle Creek has mixed land uses with residential areas of differing densities, strip commercialization and a scattered pattern of industrial uses. Figure 4 shows the city has developed along an east-west axis due mainly to the characteristics of the rivers and the location of the New York Central and the Grand Trunk Western railroad tracks.

The intersection of Michigan and Capital Avenues may be termed the "hub" of Battle Creek's central business district (CBD). Highways M-66, M-89 and M-37 all pass through or terminate in the CBD. Problems arising from having these three highways in the CBD are:

1. Increased congestion
2. Mixing of local traffic with through traffic
3. Difficulty of traffic interchange between highways
4. Adverse distance via numbered highways between the various traffic generators in the city
5. High cost to the state in balancing service versus maintenance cost

Commercial enterprises have located along the highways outward from the central business district. This "strip development" has caused additional traffic problems by requiring numerous turning movements.

To escape the congested downtown area and provide adequate parking facilities close to their stores, several shopping centers have developed in fringe areas of the city. These centers have become significant traffic generators within the Battle Creek area and have altered traffic patterns in the city.

Industrial uses are found generally in a long east-west axis adjacent to the railroad tracks and the Battle Creek and Kalamazoo Rivers. This elongated pattern of industrial development presents land use and traffic problems requiring expensive solutions, i.e., establishment of buffer zones between land uses, construction of many streets to meet requirements of industrial traffic, and design of highways capable of moving a mixture of terminal and through traffic.

While Battle Creek has many of the same housing problems as other cities its size, such as old neighborhoods and small lot sizes, its land is not fully developed. In a few areas of the city, lot sizes are large and many subdivisions have vacant lots. This leads to high cost per dwelling for supplying public services. Much of the apparently available space, however, because of the soils conditions and drainage, is not suitable for other than open uses.

A large number of old homes are adjacent to the industrial and commercial zones. Many of these are used as multiple dwellings and a few have been converted for use as small shops and offices. Three areas where deterioration has occurred are generally located:

1. From Washington Avenue west to the city limits, between the Kalamazoo River and the New York Central railroad tracks

2. Southeast of the central business district
3. On both sides of the Grand Trunk Western railroad tracks, between Union Street and the Grand Trunk Western railway yards

Figure 4. reflects the land utilization objectives of the city. It is an official zoning map and legally delineates the areas where specific types of land uses may be located. Land use proposals of the 1950 Battle Creek comprehensive city plan are the basis for this map. The adjustment of the zoning district boundaries to the land use plan proposed in the 1964 comprehensive plan studies will aid in the control of the location of land use types and population density.

Future Land Use Patterns

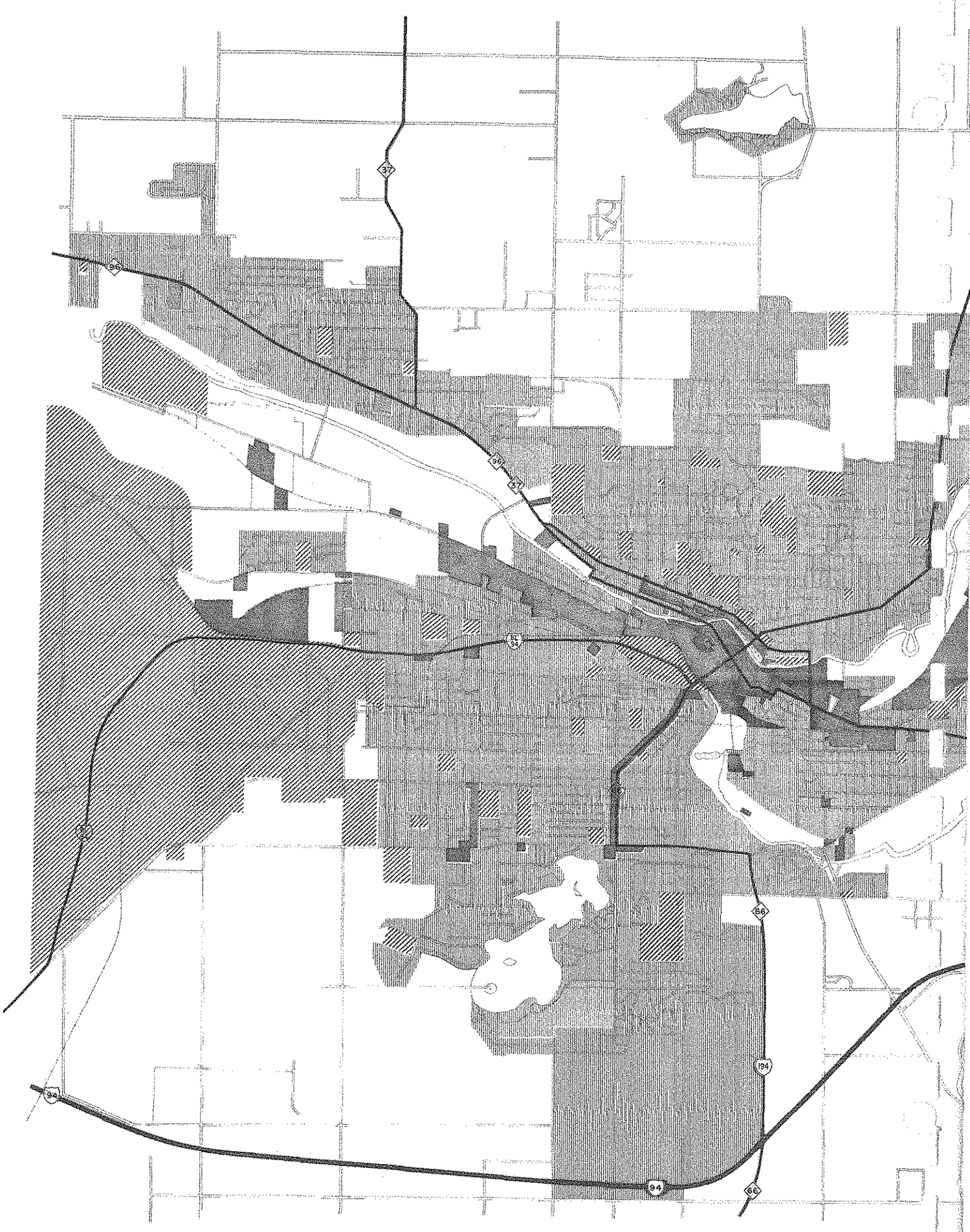
The following statements concerning future land use patterns are generalizations made by the Michigan Department of State Highways, resulting from a review of the City of Battle Creek's current land use plan.

Future land use distribution in the Battle Creek area is expected to follow the present patterns of land development. Industrial uses will probably develop in the east-west industrial corridor along the Battle Creek and Kalamazoo Rivers and the railroad tracks, including reuse areas in the Jewel Street Redevelopment Project. Industry is also expected to locate in a proposed industrial park west of Kellogg Airfield, adjacent to the new alignment of I-94BL.

Commercial uses should continue to concentrate in the central business district. However, new shopping centers of the regional and area types will probably develop along major arteries leading into Battle Creek, and where major streets interchange with I-94.

Future residential uses will probably locate in areas to the south, north and northeast of Battle Creek, as indicated by Figure 5. The greatest increase in home building is expected to occur in Battle Creek Township around Goguac Lake and adjacent to I-194. The second most significant area of future residential building is expected to be between St. Mary's Lake and the north city limits of Battle Creek. The predominant type of construction in these areas will probably be single-family homes. A higher density of residential structures is expected near the Battle Creek central business district and in proximity to other shopping areas in the city.

Future development patterns of the area can be guided by the community through various programs and actions. Among these are codes and ordinances regulating the use of land, capital improvement programs including the development of community facilities, and urban renewal. With the proper effectuation, these can assist the community in achieving desired development.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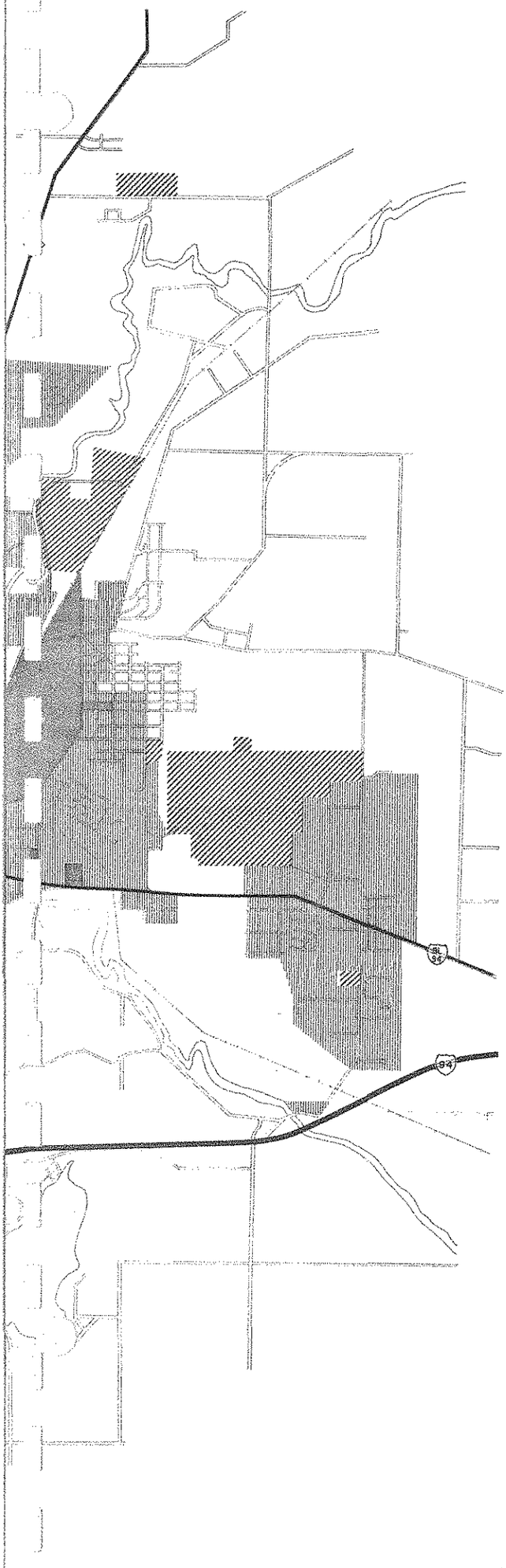


BATTLE CREEK AREA

GENERALIZED LAND USE

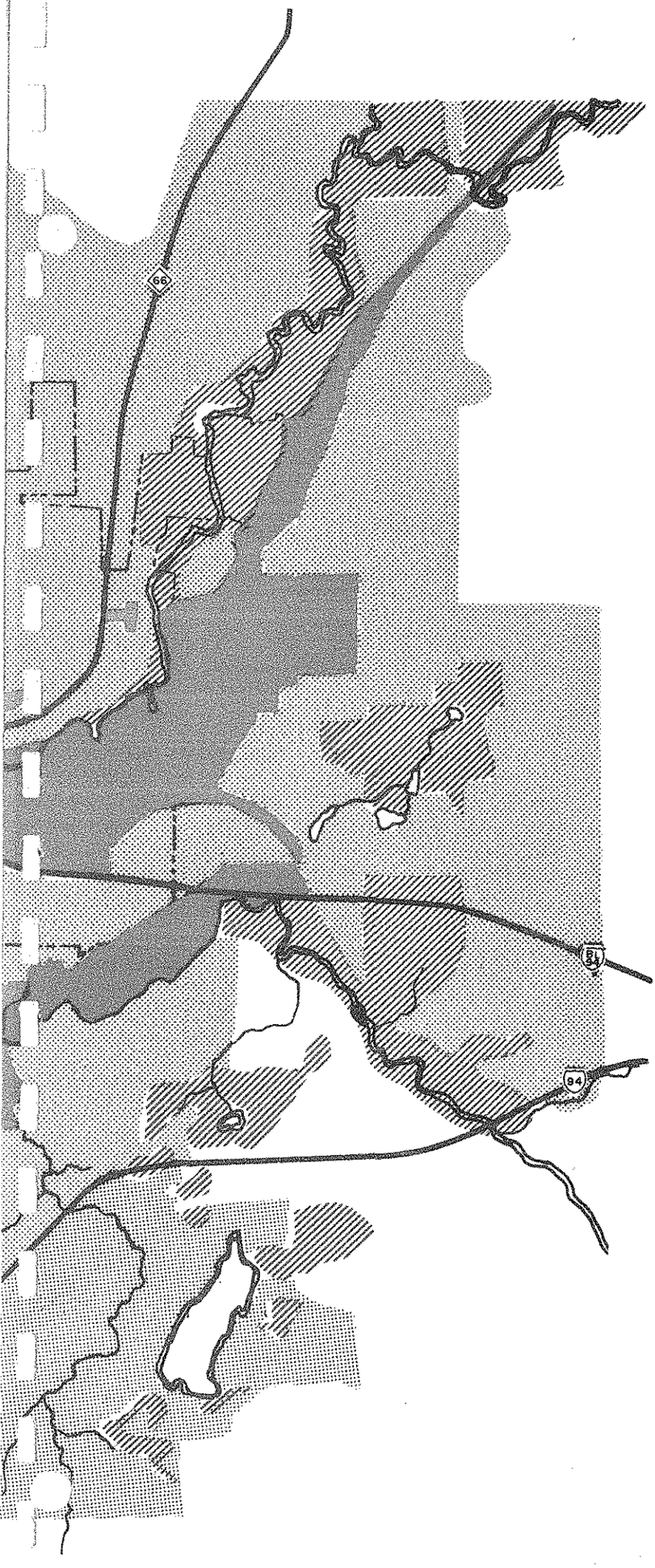
LEGEND

- RESIDENTIAL
- REDEVELOPMENT
- INDUSTRIAL
- COMMERCIAL
- PUBLIC
- PARKS & CEMETERIES

Prepared by the Planning Division
Michigan Department of State Highways

FIGURE 3


37
96
66
81
94



BATTLE CREEK AREA

FUTURE LAND USE

LEGEND

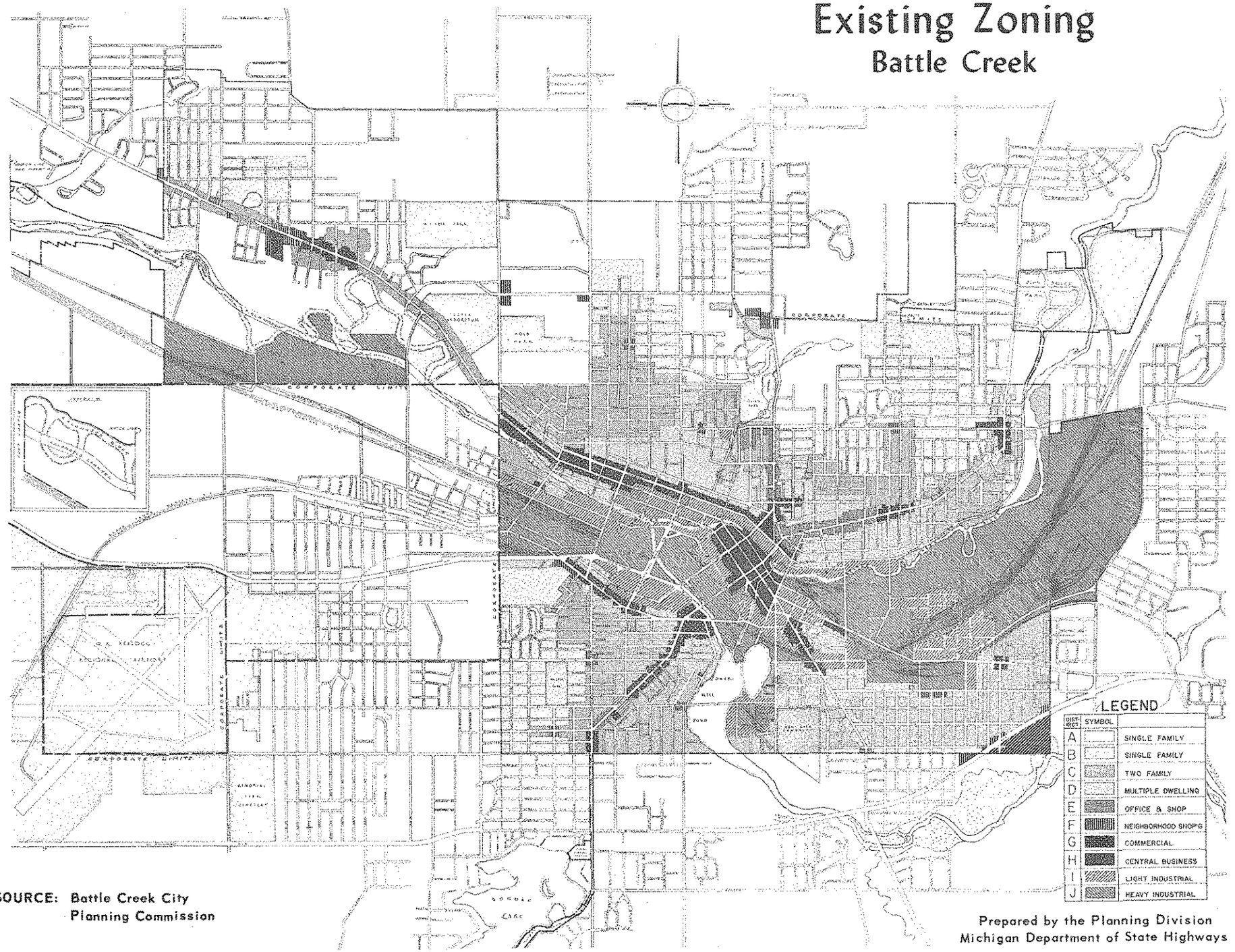
- RESIDENTIAL
- INDUSTRIAL
- COMMERCIAL
- PUBLIC/SEMI-PUBLIC

Prepared by the Planning Division
Michigan Department of State Highways

FIGURE 4

FIGURE 5

Existing Zoning
Battle Creek



SOURCE: Battle Creek City Planning Commission

Prepared by the Planning Division
Michigan Department of State Highways

Community Development And Facilities

COMMUNITY DEVELOPMENT AND FACILITIES

Flood Control and Urban Renewal

In 1950, the US Army Corps of Engineers made a study to determine if a flood control project on the Kalamazoo and Battle Creek Rivers could be justified. They recommended that the present channel of the Kalamazoo River, which traverses the central business district, be abandoned and a new channel be constructed southwest of the business area. In conjunction with these improvements, the Battle Creek River channel was to be widened, straightened and deepened from Union Street to Washington Avenue, and the Kalamazoo River was to be similarly treated from Washington Avenue downstream approximately four miles to the Fort Custer water works bridge. All of the work on the Kalamazoo River was completed in 1961 with the opening of the new channel. The city's contribution to this program included the provision of all land, relocation and reconstruction of all utilities and the construction of nine new bridges, all of which have been completed except the Stringham Road Bridge which is to be constructed to accommodate the extension of Bedford Road.

In 1953, the contemplated flood control project had made it feasible to consider planning for reuse of frequently inundated lands. An 80-acre area known as the "flats", bounded generally by Kendall Street, Capital and Upton Avenues, and the Grand Trunk Western Railway, was selected for Battle Creek's first urban renewal project (see Figure 6). The cost of the Jewel

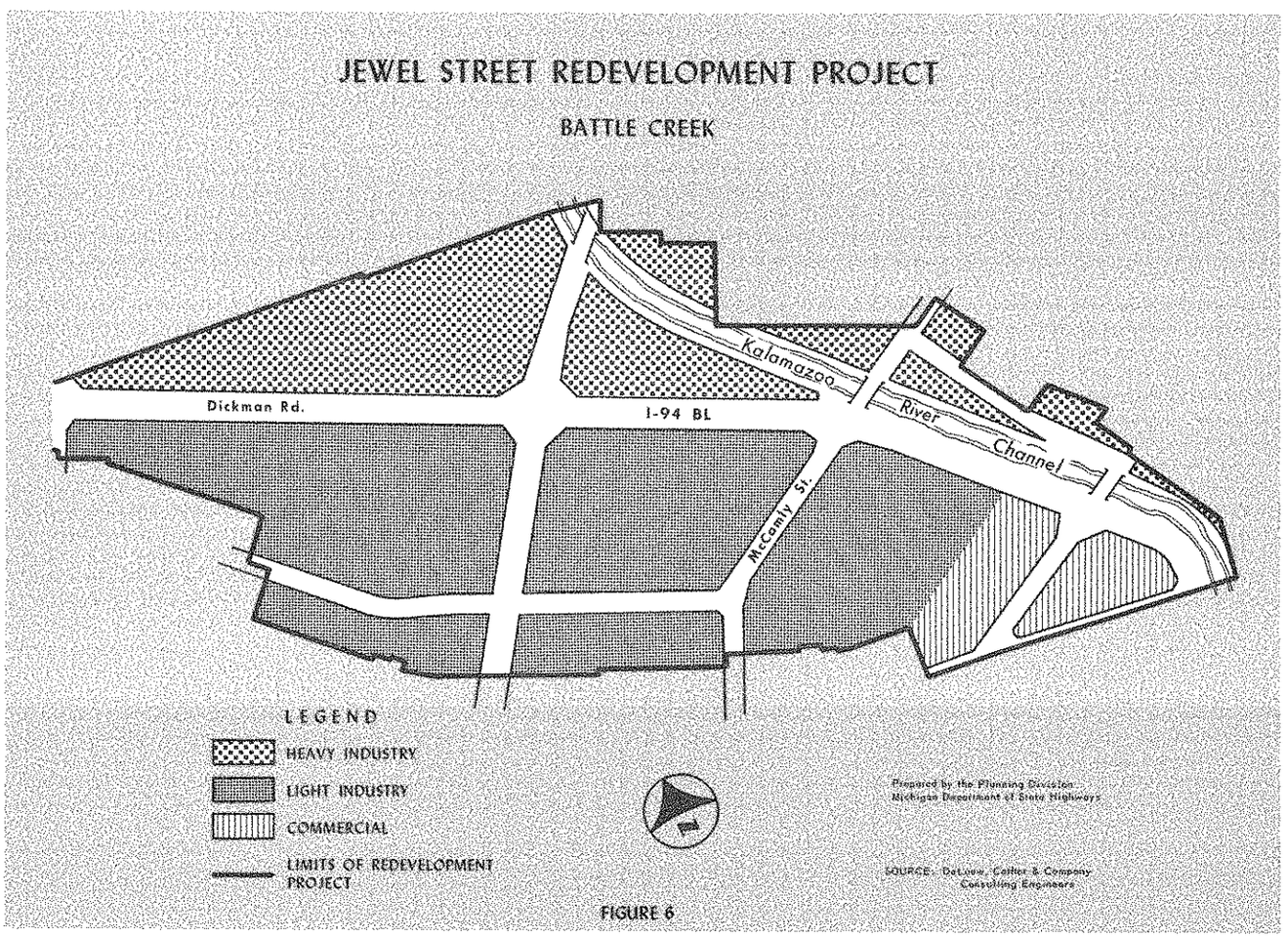


FIGURE 6

Street Redevelopment Project was approximately $5,000,000, two-thirds of which was provided by the Federal government from money appropriated to aid and encourage cities to undertake urban redevelopment projects.

The buildings in the redevelopment area were torn down, and the land was resubdivided into industrial and commercial parcels. To facilitate the heavy crosstown traffic movement and to promote reuse of the area, Dickman Road was extended through the project area as a divided highway. Redevelopment of only a small part of the total project area has already brought an amount of money into the city treasury in excess of the taxes collected by the city from all of the substandard housing that existed previously. A successfully completed urban renewal project will be a very good investment for the city. The project has been used to convert residential problem areas into industrial sites that will more than pay for the services required from the city when they have been developed.

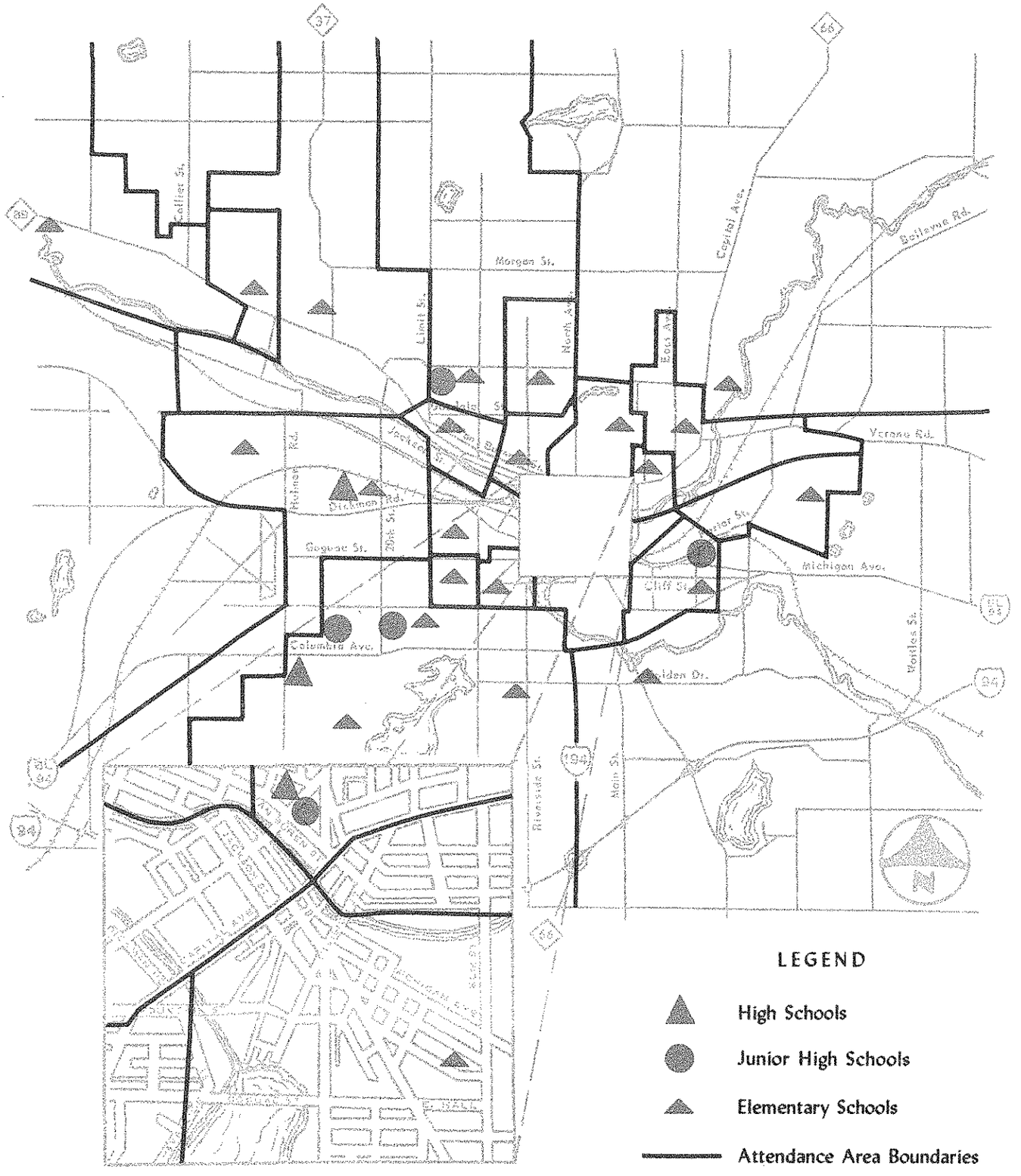
Action programs, such as flood control and urban renewal, enable the city to reconstitute its assets and provide the space and environment for continued expansion of industry, commerce, population and related land uses.

School Attendance Areas

State highways in Battle Creek, both existing and proposed, occasionally bisect elementary school attendance areas (see Figure 7). These areas are one of several important highway location factors that must be considered when recommending highway locations, but it is to be expected that some disruption to attendance boundaries may occur. In some cases it may be necessary for school systems to revise attendance area boundaries. In other attendance areas, various types of street crossings, such as pedestrian overpasses, must be provided.

SCHOOL ATTENDANCE BOUNDARIES

BATTLE CREEK AREA



Source: Battle Creek Public Schools

Prepared by The Planning Division
Michigan Department of State Highways

FIGURE 7

Transportation Facilities

Battle Creek is well served in terms of the number and type of regional, state and interstate modes of transportation for both people and goods. See Figure 8 for location of terminal facilities.

Four bus companies operate within the Battle Creek area. The Battle Creek Coach Company provides local and charter service. Greyhound Lines, Indian Trails and Shortway Lines provide regional and national bus transportation. There are presently six taxi companies in Battle Creek, with all but one of these operating from the same terminal.

The Battle Creek area is served by 29 trucking companies. These firms have both local and national service areas, and adequate connections to state highways are important for their existence. It is important that truck terminal locations are recognized in the highway planning process. Some of the terminals serve several trucking firms.

The New York Central and Grand Trunk Western railroads provide passenger and freight service. In addition, W. K. Kellogg Regional Airfield offers scheduled commercial air service and is a link in the national defense transportation network.

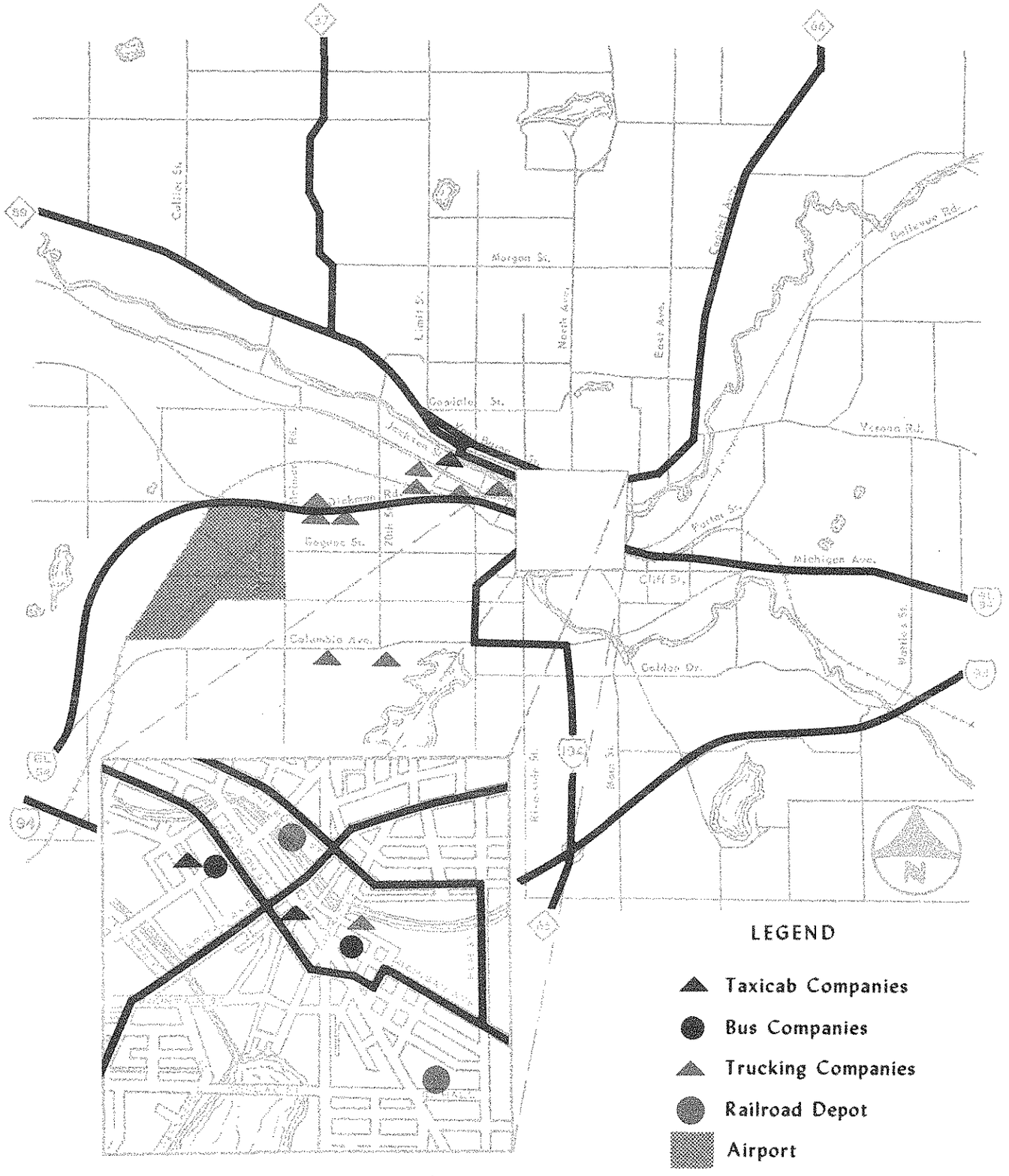
The railroad system in Battle Creek originated in an era when practically all the major transportation needs of the nation were met by rail carriers. Although rail carriers are still a prime freight mover in the Battle Creek area, profound changes have taken place in the various modes of transportation as a result of radically altered transportation needs. Many city streets are congested, with thousands of automobiles and trucks carrying out the multitude of functions that have become an integral part of daily living.

Superimposing an overloaded street system upon a railroad network that was built to meet the needs of a different transportation era has caused constant conflict between rail and street traffic in Battle Creek. This problem is particularly acute where the railroad tracks cross state highways. The present state highway system in Battle Creek is intersected six times by operating railroads in the congested east-west industrial and business corridor, resulting in numerous conflicts between the two transportation systems.

Planning for any redevelopment or expansion of the state highway system in Battle Creek must include consideration of the conflict between street and rail facilities. Any proposed plan must offer an equitable solution to the problem.

TRANSPORTATION FACILITIES

BATTLE CREEK AREA



Prepared by the Planning Division
Michigan Department of State Highways

Source: Planning Division Michigan
Department of State Highways

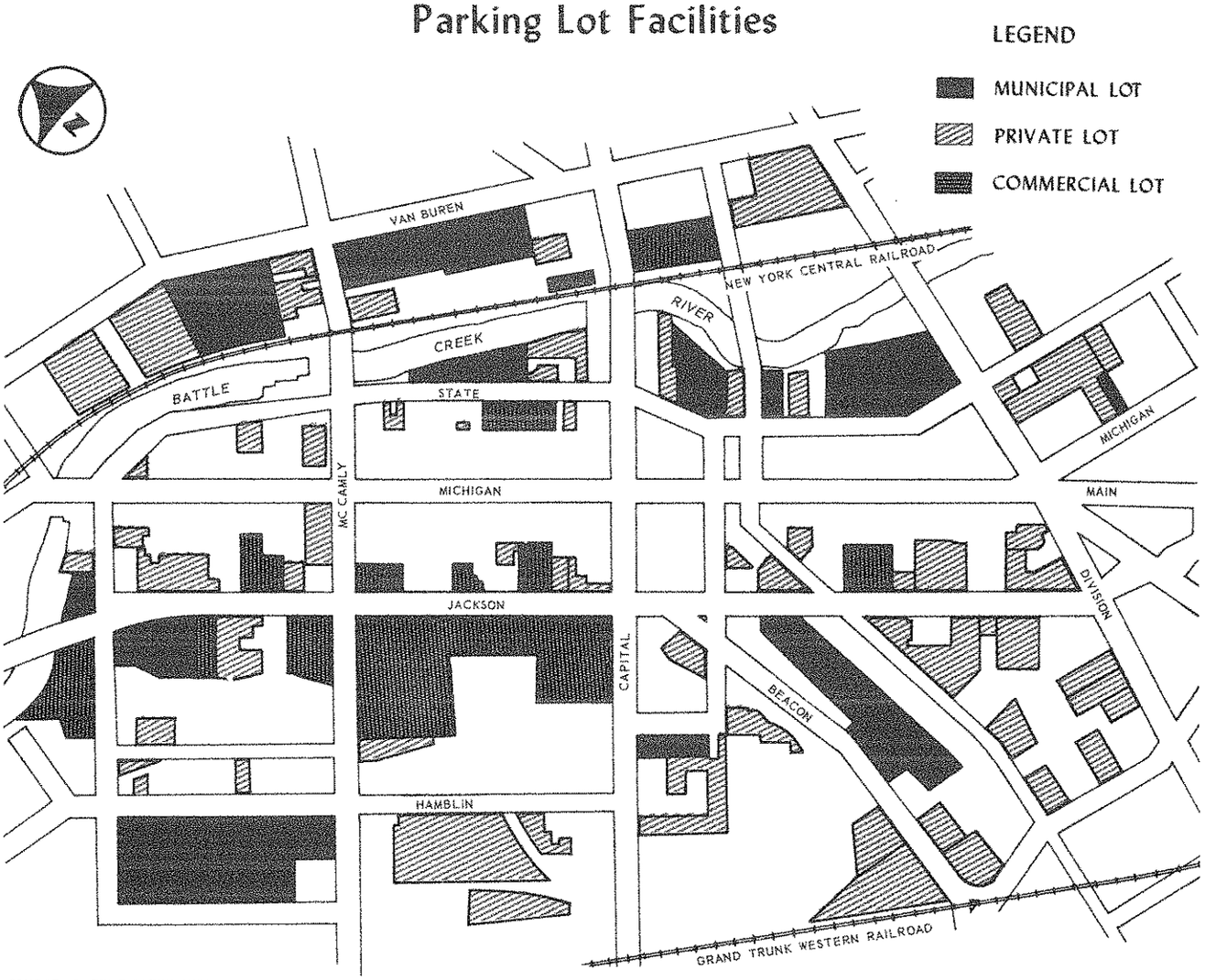
FIGURE 8

Downtown Parking

The provision of adequate off-street parking is important if the vitality of the central business district is to be maintained. On-street parking sufficient to adequately satisfy the needs of shoppers in a downtown area is seldom available. When on-street parking is prevalent, congestion and reduced traffic capacity results because the flow of traffic is frequently interrupted. Provision of convenient, off-street parking in sufficient quantity to permit removal of on-street parking and encourage downtown shopping eliminates this problem.

Battle Creek is fortunate that considerable off-street parking already exists in the central business district (Figure 9). This indicates a progressive attitude on the part of responsible people in the community and displays an awareness of customer needs. Sufficient parking, however, does not solve all traffic problems found in the central business district. Appropriate signalization, channelization, pedestrian controls, right-of-way widths and routing of traffic by trip purpose, are also needed for traffic relief in the business area. Provisions should also be made for adequate traffic access to the central business district parking lots from highways.

Central Business District Parking Lot Facilities



SOURCE: BATTLE CREEK CITY PLANNING COMMISSION

FIGURE 9

PREPARED BY THE PLANNING DIVISION MICHIGAN DEPARTMENT OF STATE HIGHWAYS

Existing Highway System

EXISTING HIGHWAY SYSTEM

The following paragraphs and Figure 10 describe existing highways in the Battle Creek area. All of these routes are designed as part of the Federal-Aid Primary or Interstate System.

M-66

This route was once a major traffic axis that handled a large volume of industrial traffic. In 1958, it had an average daily traffic (ADT) volume over 8,000 vehicles north of Battle Creek and approximately 10,000 ADT on the south side of town. Since the completion of I-94 M-66 has become a less important regional highway, although in 1964, it carried nearly 10,500 ADT at the north city limits. This route enters Battle Creek from the northeast; west of the Battle Creek River. Within the city, it parallels the river as far south as the central business district. It then proceeds southerly on a routing of Capital and Columbia Avenues, and duals with the new alignment of I-194 to a point of interchange with I-94. The importance of M-66 will be further reduced with the completion of the limited access US-27 freeway, extending from I-94 north to M-78 near the City of Charlotte.

M-89

This route connects Kalamazoo and Battle Creek on an alignment north of I-94. M-89 carries relatively high volumes of short-distance, locally-oriented traffic. It approaches Battle Creek from the northwest on Michigan Avenue and connects with M-37 at Bedford Street. It is then divided into a one-way street system just west of Limit Street and terminates at M-66 (Capital Avenue).

M-37

This route is the major highway for traffic traveling to and from Grand Rapids and other west Michigan Areas. In 1964, it carried 6,000 ADT at the north city limits and 8,000 ADT at its junction with M-89.

I-94 Business Loop

This route enters Battle Creek from the east on Michigan Avenue. Westbound highway traffic turns north on Elm Street, proceeds to Van Buren Street, and goes west on Van Buren to intersect with M-66 (Capital Avenue). Eastbound I-94BL traffic, from Capital Avenue east, utilizes Jackson and Pittee Streets and Michigan Avenue to Elm Street. Michigan Avenue traffic is two-way east of Elm Street. I-94 BL duals with M-66 (Capital Avenue) from Van Buren Street south to Dickman Road. From this point, the route proceeds westerly along Dickman Road, turning south on a new alignment along the eastern edge of Fort Custer, connecting with Columbia Avenue and then on south to I-94. It is a business loop for traffic destined for Battle Creek from Chicago and Benton Harbor to the west and the Detroit area to the east.

I-194

This route has been constructed between Columbia Avenue and I-94. Upon completion, it will extend into the central business district of Battle Creek and will be the major highway connection between the city and I-94.

I-94

Interstate 94 is a limited-access divided highway connecting the Chicago and Detroit areas, providing highway service to many large urban areas along the route. It passes south of Battle Creek, providing access to the city at six interchanges; Michigan Avenue, Beadle Lake Road, I-194, Capital Avenue, Three Mile Road, and Columbia Avenue.

Federal-Aid Systems

Only a very minor amount of highway construction is carried out without Federal financial assistance. By this means, the Federal government, through the Bureau of Public Roads, assures a degree of uniformity and control of standards over the national highway system. Therefore, the planning of future highways must conform to the requirements established for construction of the Federal-Aid System.

EXISTING HIGHWAY SYSTEM

BATTLE CREEK AREA

Prepared by the Planning Division
Michigan Department of State Highways

FIGURE 10

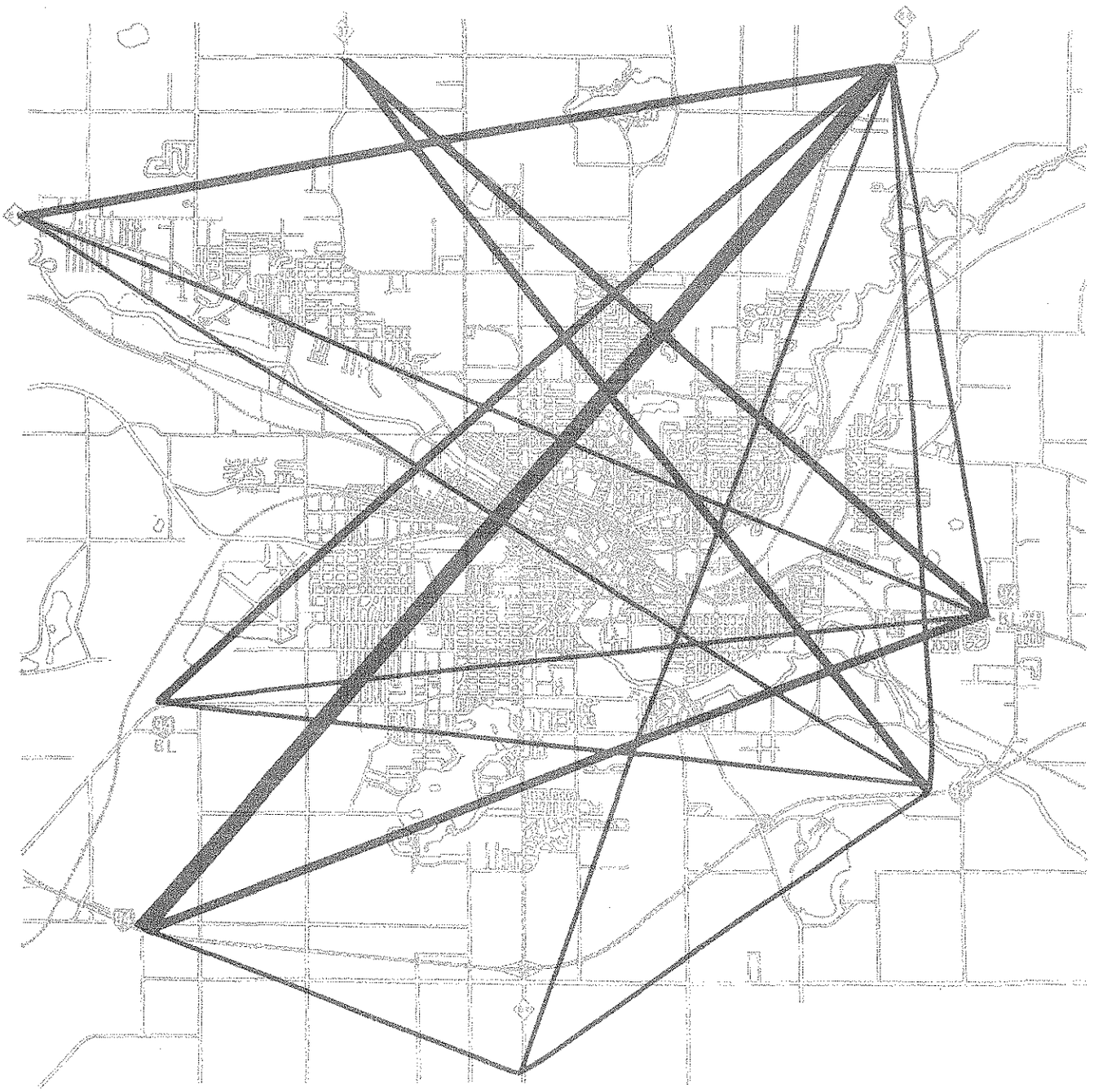
Desire Lines

All highways relate to one another and to the various major traffic generators within the Battle Creek area. Every highway serves, to some extent, all traffic generators in the area. The degree to which a particular highway serves each generator depends upon its proximity to the generator, directness of highway access, amount of congestion, surface conditions, safety and the desire of motorists served by the highway to reach the generator.

An origin-destination (O-D) study, conducted in 1961 by the Michigan Department of State Highways in cooperation with the city and the Bureau of Public Roads established that most motorists traveling through Battle Creek desired to travel along an east-west axis following Interstate 94*, and from north M-66 to west I-94 (see Figure 11). While the O-D study does show a major through traffic movement from north M-66 to west I-94, the traffic on M-66 also contains a large proportion of city-oriented vehicles. A bypass would not be warranted for the through traffic movement between these two highways at this time. This vehicle flow will be improved with the completion of the I-194 penetrator to Fountain Street and relocation of M-66 to the penetrator. Completion of the proposed freeway from I-94 to existing US-27/M-78 north of Charlotte will permit diversion of much of the traffic from M-78 that moves between Lansing and Battle Creek and points west. The bottleneck on South Capital Avenue in Battle Creek and Lakeview will be relieved and the cross-city traffic will move more smoothly.

* 1961 Average Weekday Traffic on I-94 between the Michigan Avenue and Columbia Avenue interchanges was approximately 9,000. Because of scale limitations this data is not shown on Figure 10.

Traffic Interchange Between Highways
1961 Average Weekday Traffic



LEGEND

600 AWT

100 – 500 AWT

50 – 100 AWT

NOTE: AWT less than 50 not indicated

Prepared by The Planning Division
Michigan Department of State Highways

Source: Traffic Survey Section, Traffic Division
Michigan Department of State Highways

FIGURE II

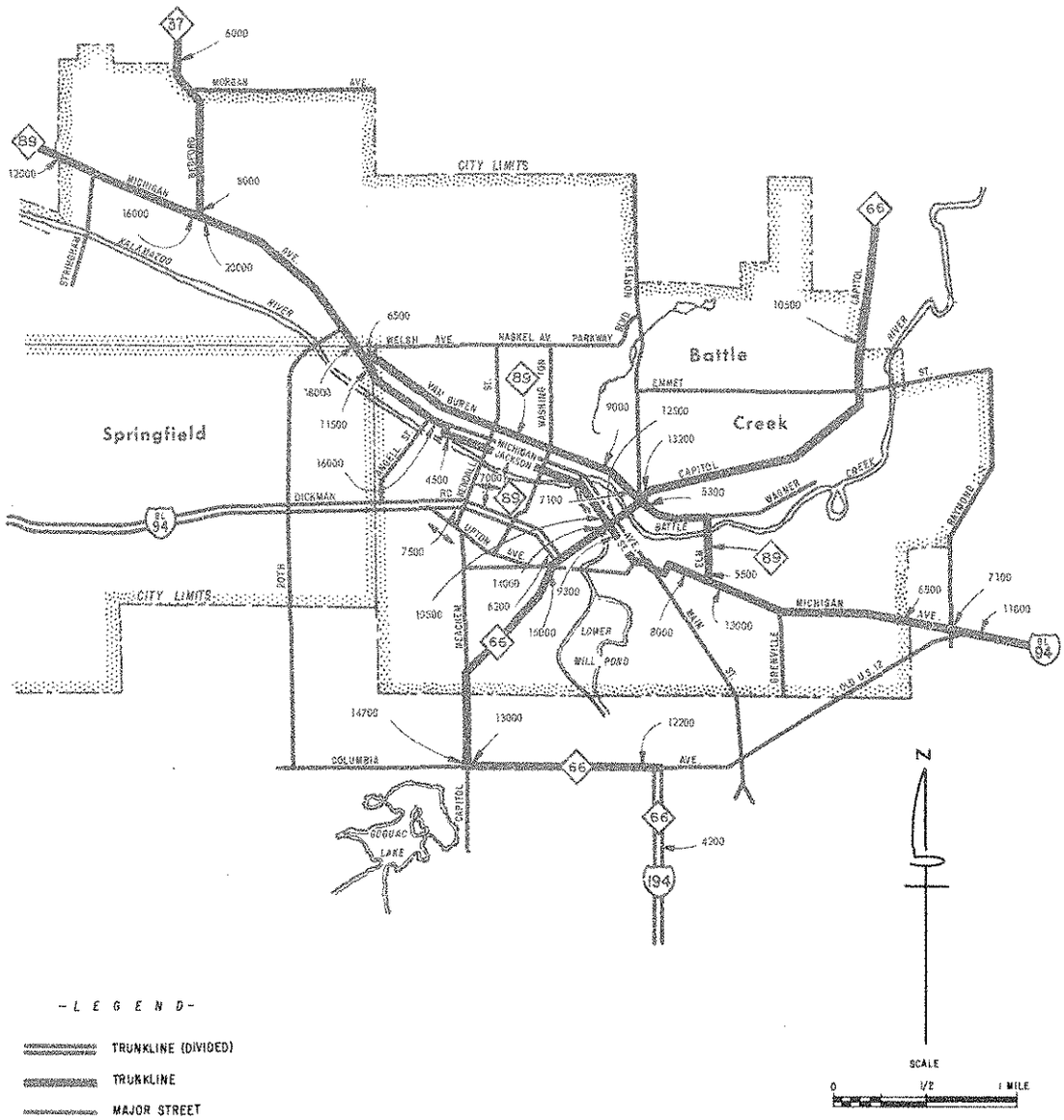
Traffic on the System

Figure 12 graphically displays average daily traffic volumes and their distribution on the existing highway system in Battle Creek and the surrounding urban area. It is based upon 1964 traffic counts. The traffic distribution pattern demonstrates the comparative traffic demand on the various highway components in the system. M-66/I-194 on South Capital Avenue is heavily travelled and congestion occurs frequently. M-89/37, from the central business district to Bedford Road, is also inadequate for handling its traffic load.

Studies of restricting factors, such as varying street widths, on-street parking, strip commercial development, railroad crossing interference, variations in traffic flow, and evaluation of the traffic shown, clearly emphasize the need for improved highway facilities.

BATTLE CREEK AREA TRAFFIC VOLUMES

1964 AVERAGE DAILY TRAFFIC



SOURCE: Traffic Survey Section
Traffic Division, Office
of Design, Michigan Department
of State Highways

Prepared by the Planning Division
Michigan Department of State Highways

FIGURE 12

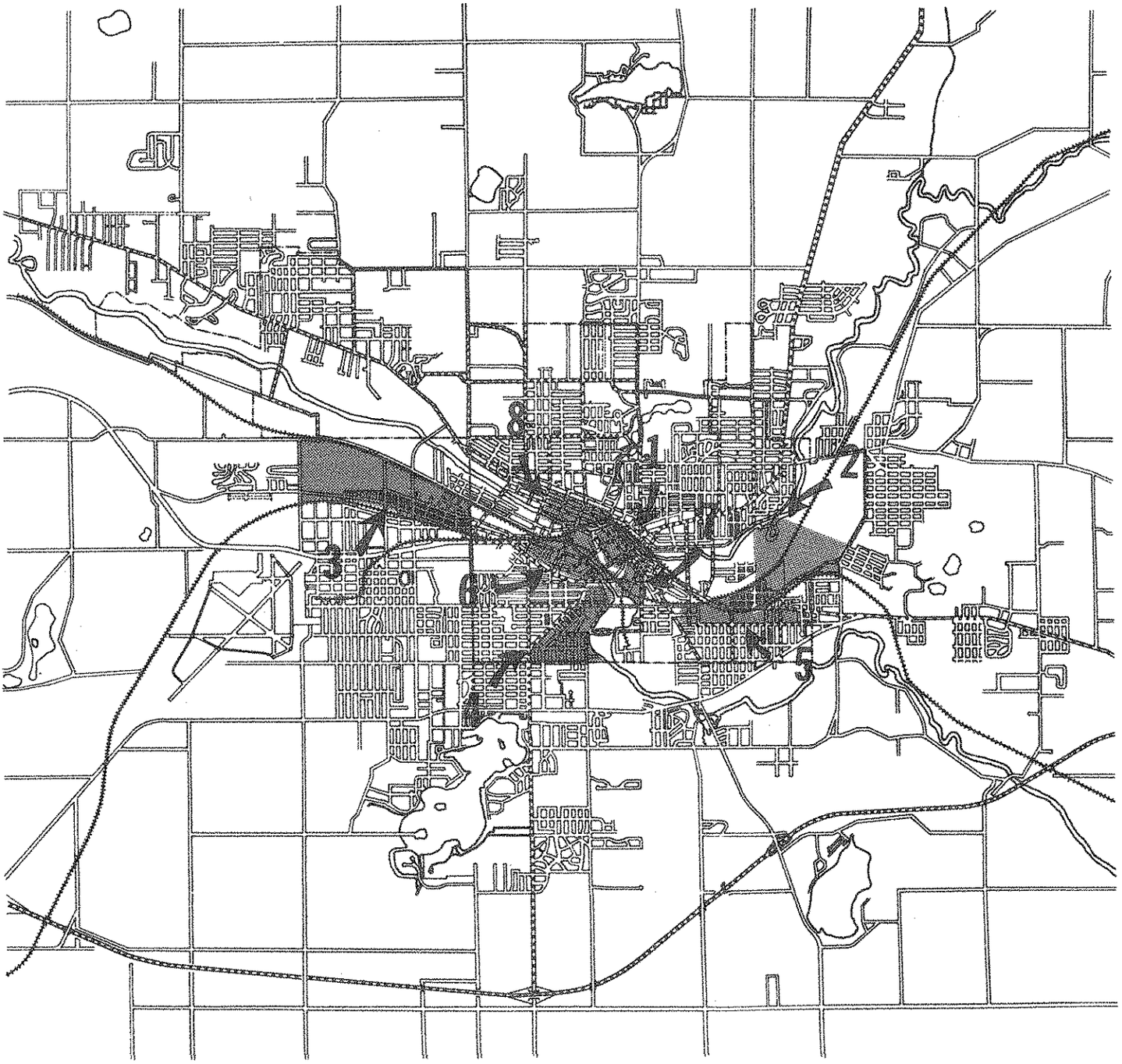
Areas of Major Attraction

The O-D study shows that the principal zone of attraction, for trips having either an origin or destination outside the traffic study area (terminal traffic), is the central business district (see Figure 13). The second most attractive zone includes the Kellogg Company plant on Porter Street. The zones containing the Post Cereals, Sears-Roebuck, Ralston Purina, Clark Equipment and Eaton Manufacturing firms are also strong attractors. Other important zones are the mixed industrial and commercial areas surrounding the central business district. The major zones mentioned above contain the attractors for approximately 40 percent of the terminal traffic entering the O-D study area. The remaining 60 percent of terminal traffic is scattered throughout the remaining zones of the study area.

Further details of the origins and destinations of trips, trip desire patterns and traffic on the system can be obtained from the "Battle Creek Metropolitan Area Traffic Study," which has been prepared by the Michigan Department of State Highways.

BATTLE CREEK

Zones Of Principal Traffic Attraction



MAJOR ATTRACTORS WITHIN ZONES BY ORDER OF RANK

1. Central Business District
2. Kellogg Company
3. Clark Equipment & Eaton Mfg.
4. Sears Roebuck Company
5. Post Cereals
6. Ralston Purina
7. Fringe Commercial
8. Fringe Commercial

Source: Traffic Survey Section, Traffic Division
Michigan Department of State Highways

Prepared by The Planning Division
Michigan Department of State Highways

FIGURE 13

Capacity of Streets

The traffic capacity of a street system is determined by an evaluation of pavement widths, parking restrictions, general alignments, signal spacing and timing, traffic speed, pedestrian movement, structural encroachments and types of traffic. Figure 14 is a graphic display of the resultant evaluation of the highway system in Battle Creek, in terms of 1965 traffic volumes.

It can be assumed that, with the construction of the I-194 penetrator to Jackson Street, operational problems on south Capital Avenue (M-66/I-94BL) will be minimized. M-37 will not present any major problems, since traffic is not excessive and the pavement width of this highway is adequate for anticipated traffic.

Because of existing traffic volumes, pavement widths and parking on M-89, difficulties have arisen in the following locations:

1. Bedford Road to Van Buren Street
2. Van Buren Street to Angell Street, where local traffic is two-way and state highway traffic is one-way
3. Along the one-way streets (Van Buren and Jackson) where they penetrate to the central business district and are adjacent to commercial areas

Since the one-way streets constituting M-89 traverse the commercial-industrial buildup in central Battle Creek, they serve highway traffic and act as circulators for the central area. As long as volumes remain high and street parking is permitted, M-89 will be congested. The majority of terminal traffic on M-89 is destined for the commercial-industrial strip in the downtown area.

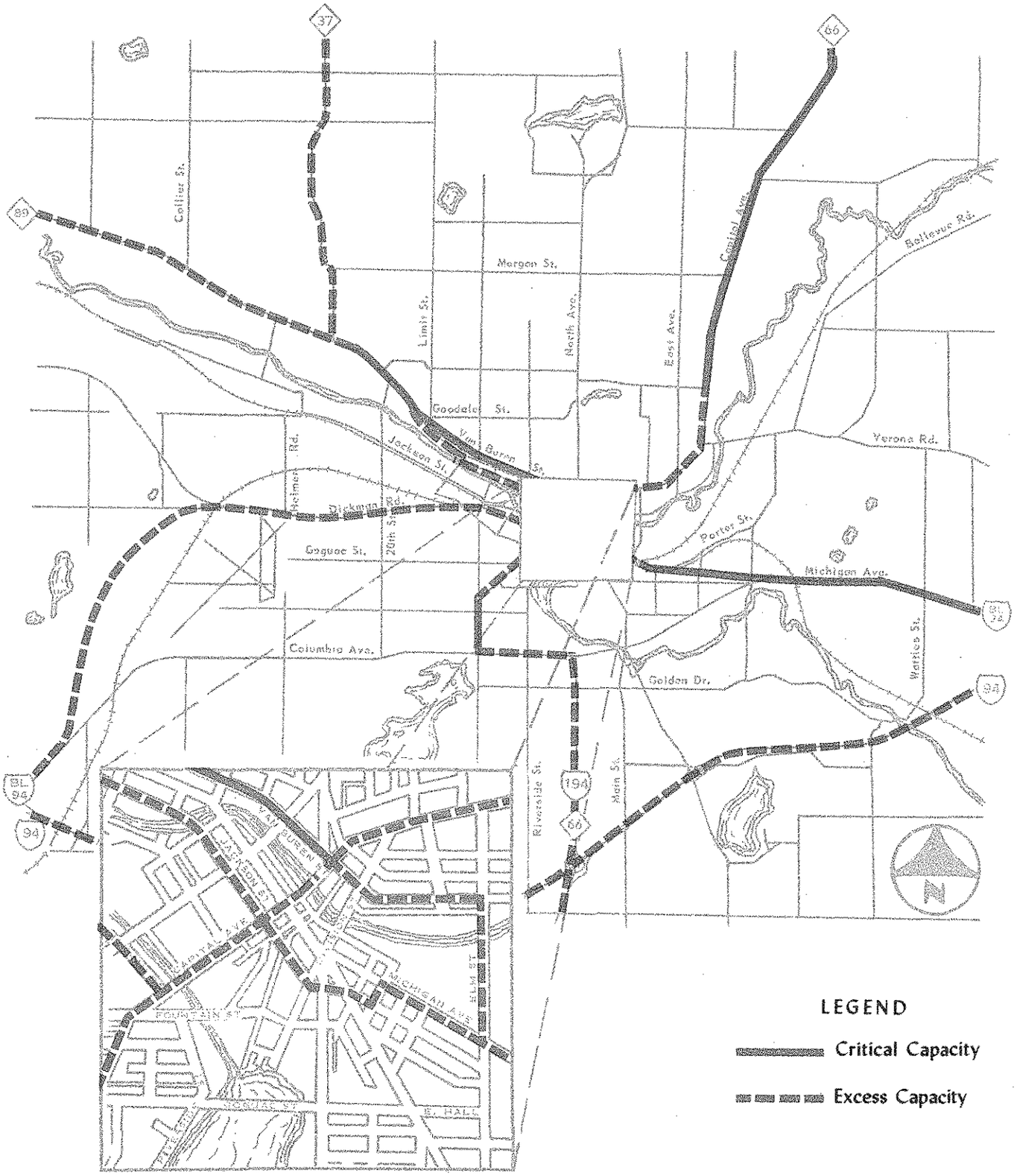
It is apparent that the state highway system in Battle Creek displays most of the classic ills that plague highway development. By recognizing these problems and classifying them according to their relative importance and influence, it is possible to do a satisfactory job of planning and redevelopment.

The major problems affecting the existing highway system are:

1. Lack of traffic capacity due to varying street widths, on-street parking and poor traffic operation
2. Inadequate highway service to areas of existing industrial development in proximity to Michigan Avenue, east of the central business district to Columbia Avenue.
3. Traffic stoppage resulting from conflicts at numerous railroad crossings
4. Land use problems, such as strip commercial development
5. Routing traffic not having destinations in the central business district through this part of the city
6. Lack of a completed I-194 limited-access penetrator, connected with other components of the highway system

These are some of the problems that require careful consideration and planning for remedial action if Battle Creek is to have a modern, adequate highway system that will complement city growth.

CAPACITY SUFFICIENCY ON EXISTING STATE HIGHWAYS



SOURCE: Sufficiency Ratings of Michigan Highways, 1965 – 1966
Michigan Department of State Highways

Prepared by the Planning Division
Michigan Department of State Highways

FIGURE 14

Analysis Of Alternatives

ANALYSIS OF ALTERNATIVES

There are usually several feasible solutions to any highway system problem. Deciding factors in the selection of a solution best suited for a particular city or area are; the objectives of the community, the foresight incorporated into its governmental policies, and the extent of funds available for highway construction and maintenance. On this basis, several alternative highway systems must be evaluated to determine their relative benefits and disadvantages to an area and enable the ultimate selection of the optimum local highway network.

Community Highway Objectives

The reasons for developing a Battle Creek area highway plan are to:

1. Provide major traffic generators with adequate access to principal highways
2. Provide impetus to the orderly development of future growth patterns
3. Provide a highway system that will remove through traffic from the central business district
4. Enable the city to carry out revitalization programs, including urban renewal
5. Permit revision of the local central business district street system

The solution to any problem can be determined most effectively through a comparative evaluation of several feasible alternatives. The advantages and disadvantages of alternatives for a Battle Creek area highway system are presented in the following text and on accompanying maps.

Alternative System I

System I is the existing highway system in the Battle Creek area. I-194 is completed to Interstate standards from I-94 north to Columbia Avenue. The highway signing of Columbia Avenue, west to Capital Avenue and north on Capital to the central business district is intended to be temporary until I-194 can be completed to Interstate standards.

Advantages

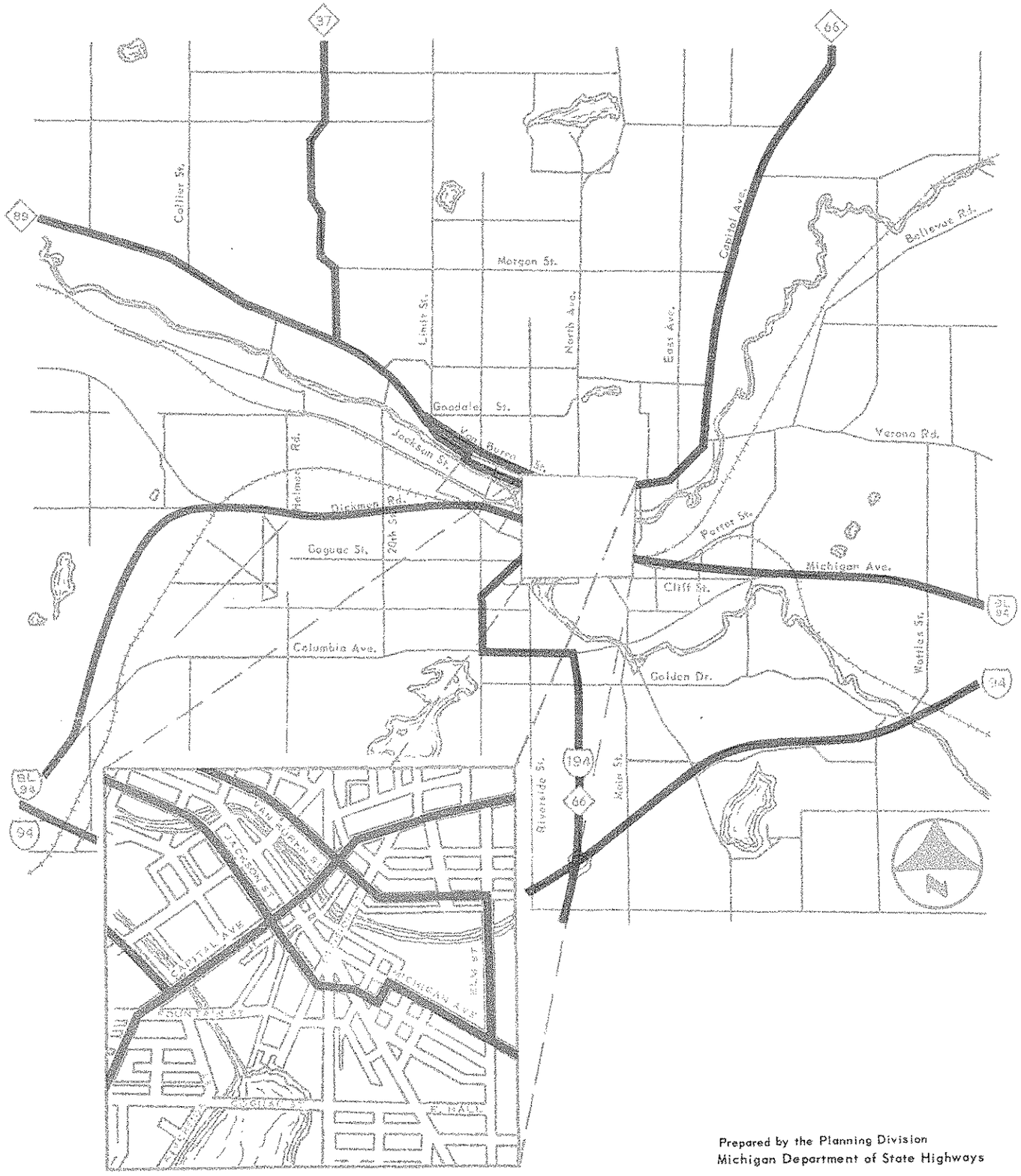
1. Retention of this system would not involve large expenditures for new construction.
2. No additional property acquisition, involving some disruption of established neighborhoods, would be required.
3. Less total miles of highways are needed in the Battle Creek area with this system than with System II.

Disadvantages

1. Many portions of this system have insufficient capacity.
2. All highways in the city pass through or terminate in the CBD, placing unnecessary demands on the downtown street system.
3. Noise, smoke, traffic congestion and safety hazards are created by large traffic volumes in the central business district.
4. Traffic congestion in the downtown shopping area, with all its attendant problems, detracts from the central business district's customer appeal.
5. Numerous railroad grade crossings cause a loss of time and money for highway users.
6. Adverse travel time and distance are required with the use of Columbia and Capital Avenues as I-194.
7. Fast, efficient highway service is not provided for through traffic movement.

BATTLE CREEK AREA HIGHWAY SYSTEM

ALTERNATIVE I (EXISTING SYSTEM)



Prepared by the Planning Division
Michigan Department of State Highways

FIGURE 15

Alternative System II

System II would involve I-194 being completed to Interstate standards, from I-94 to Jackson Street. A proposed new routing of highway traffic in the central business district, extension of the M-89/37 one-way pairing (Van Buren and Jackson Streets), and a future one-way system for M-66 would also be included as part of this alternative.

Advantages

1. More efficient flow of traffic on M-89 would be provided by extending the one-way pairing of Van Buren and Jackson Streets.
2. A facility enabling increased traffic flow on north M-66 would be provided.
3. The Cliff-Hall Streets alignment (I-94BL), from Columbia Avenue to the Millpond, would provide smoother flow of highway traffic traveling to and from the east and having destinations in major zones of traffic attraction located along the river.
4. Completed I-94, as a limited access facility, would provide good access to the central business district from I-94.
5. Improved connections between highways would be provided.

Disadvantages

1. Traffic congestion would not be relieved on portions of M-89.
2. M-89, M-66 and I-194 would all be routed through the central business district, placing unnecessary demands on the downtown street system.
3. Noise, smoke, traffic congestion and safety hazards would be created by heavy traffic movements in the central business district.
4. Traffic congestion in the core area, with all its attendant problems, would detract from the desirability and aesthetics of the central business district as a major shopping area.

BATTLE CREEK AREA HIGHWAY SYSTEM

ALTERNATIVE II

Prepared by the Planning Division
Michigan Department of State Highways

FIGURE 16

Alternative System III

System III was evaluated to determine the effects of deleting ramps from the two northern quadrants of the Millpond interchange. Kendall and Elm Streets would be added to the highway system to permit turning movements prohibited at the interchange. North M-66 (Capital Avenue) from Van Buren Street north, would be replaced by a one-way system consisting of Van Buren Street and the extension of Cherry Street, from the Capital-VanBuren intersection north to Wagner Drive. It would continue as a two-way street on Wagner Drive to John W. Bailey Park, where it would connect with Capital Avenue (existing M-66).

Advantages

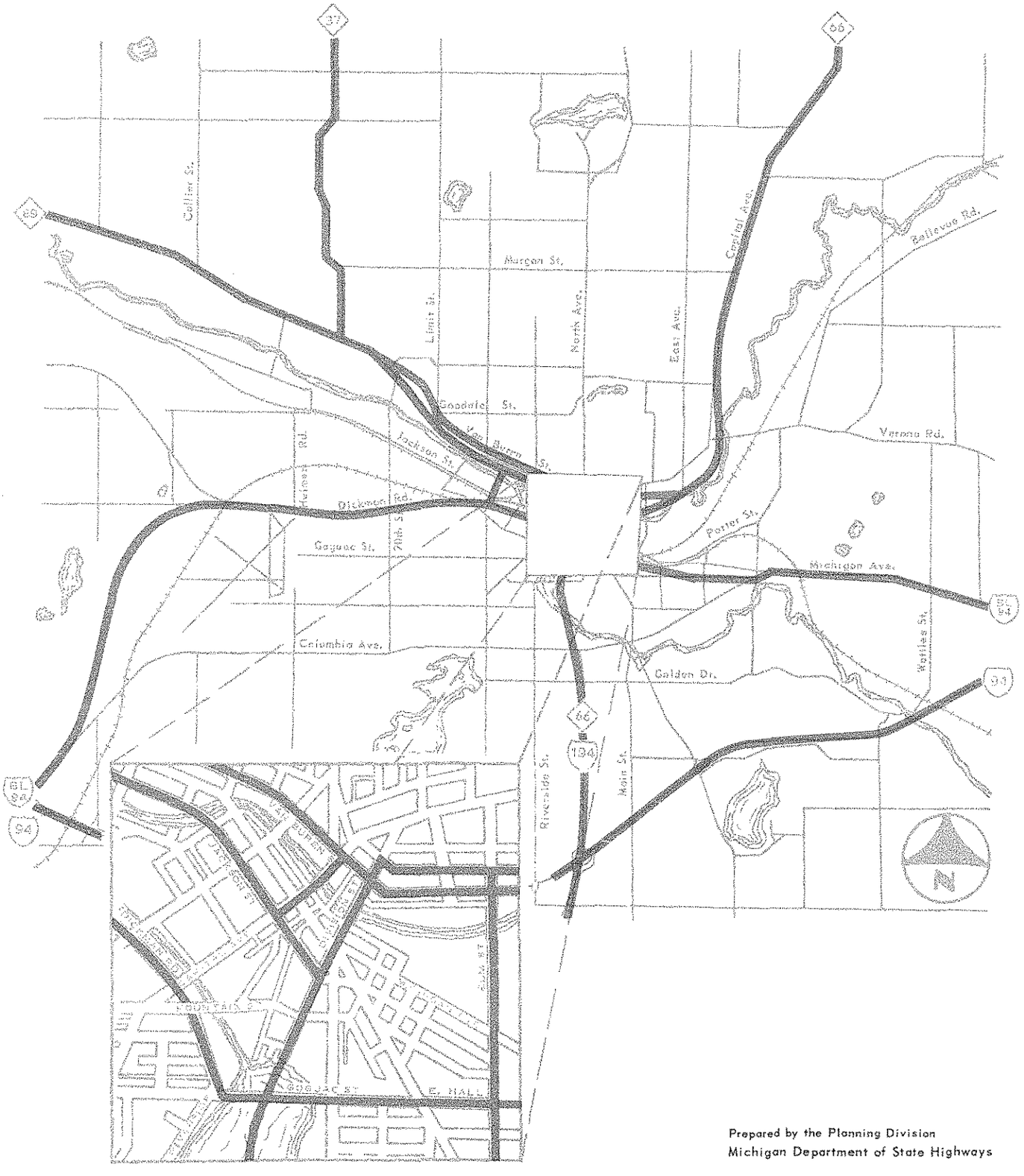
1. A more efficient flow of traffic on M-89 would be possible by extending the one-way pairing of Van Buren and Jackson Streets.
2. An improved flow of traffic on north M-66 would be possible.
3. The improvement to the eastern leg of 94BL would provide an improved facility for traffic traveling to and from the east and having destinations in major zones of traffic attraction located along the river.
4. Completed I-194, as a limited access freeway, would provide good access to the central business district from I-94.

Disadvantages

1. Traffic congestion would not be relieved on portions of M-89.
2. M-89, M-66 and I-194 would all be routed through the central business district, placing unnecessary demands on the downtown street system.
3. Noise, smoke, traffic congestion and safety hazards would be created by heavy traffic movements in the central business district.
4. Traffic congestion in the downtown area, with all its attendant problems, would detract from the desirability and aesthetics of the central business district as a major shopping area.
5. More highway mileage would be needed with this system than with Alternatives I or IV.
6. Efficient interchange of traffic between highways would not be provided.
7. Flexibility for adaption to any future highway system would be held to a minimum.

BATTLE CREEK AREA HIGHWAY SYSTEM

ALTERNATIVE III



Prepared by the Planning Division
Michigan Department of State Highways

FIGURE 17

Alternative System IV Recommended

The results of coordinated planning efforts by the Planning Division and the local planning commissions, in developing a highway system for the Battle Creek area, are presented graphically on Figure 18. The recommended system is based upon existing needs and estimated future development.

Advantages

1. The Cliff-Hall Streets alignment (I-94BL) would provide for smooth flow of traffic traveling to and from the east and having destinations in the major zones of traffic attraction located along the river.
2. I-194, completed as a limited access highway, would provide good access to the central business district from I-94.
3. An integrated highway system would be provided.
4. The west leg of I-94BL provides state highway access to several areas with industrial growth potential as well as a western entry into the Battle Creek area from I-94.
5. It would involve maintenance of less highway mileage than would System I, II or III.
6. Traffic congestion on M-89 (Van Buren and State Streets) would be relieved.
7. The majority of highways and highway traffic would be removed from the central business district.
8. It would constitute a highway network capable of integrating with any future highway system.
9. It would involve reduction of the number of at-grade main line railroad crossings from six to three.

Disadvantages

1. Some adverse distance would be required for traffic interchanging between M-66 and M-89.
2. Two main line railroad crossings would be required on any north-south connector between Michigan Avenue and Dickman Road (M-89).
3. At several locations, highways would pass in close proximity to schools.

The physical components of the recommended system are itemized as follows:

M-37

This route is planned to be combined with M-43 to form one major traffic facility between Hastings and the Battle Creek–Kalamazoo area.

I-94

This route would not be physically affected, but its use will increase as it becomes a completely integrated part of the state and local systems.

I-194

The penetrator route into the city would be completed as shown and would provide excellent access to the business and industrial sections and connect with the other components of the local highway system.

M-66

This route would approach the area from the south, dual with I-194 through the Millpond area, and proceed north on Division Street to its intersection with Capital Avenue (existing M-66).

I-94 BL

Three possible alignments have been considered for the eastern portion of this route (See Figure 18). The first one would enter the city from the east on Michigan Avenue, turn onto Columbia Avenue for a short distance to Cliff Street, follow Cliff Street to the vicinity of Jericho Road, proceed northwesterly on a new alignment to Hall Street and then on the Hall Street axis to the Millpond interchange. This is the recommended alignment.

The second possible alignment would continue on Michigan Avenue, turning northerly in the vicinity of the New York Central railroad overpass on a new alignment south of the tracks. It would generally follow the tracks to pass between the General Foods Paper Container Division plant and the New York Central railroad, join Hall Street and then proceed west to the Millpond interchange.

The third possible alignment would continue into the city on Michigan Avenue, proceed

southwesterly on a new alignment between the General Foods Paper Container Division plant and the New York Central railroad to Hall Street and then west to the Millpond interchange.

The advantages and disadvantages for these alternatives are as follows:

CLIFF STREET ALIGNMENT

Advantages:

1. It would cost less than either of the other two alternatives.
2. It would permit a free flow of traffic with minimum interference.
3. It would not cross any railroad tracks at grade nor require grade separation structures.
4. It would be the most direct route.
5. It would not interfere with the operation of the Paper Container plant.
6. It would provide more direct service to the General Foods plants than does Porter Street.

Disadvantages:

1. It would pass directly by the Post Elementary School and bisect its attendance area.
2. It would subject the Cliff Street area to possible adverse influences created by heavy traffic movements.
3. It would provide less direct service to Kelloggs than the other alternatives.
4. It would necessitate the use of residential streets to serve the Kellogg Company.
5. It may interfere with inter-plant truck movements of Post Division of General Foods.

PORTER STREET ALIGNMENT

Advantages:

1. It would directly serve Kelloggs and General Foods.
2. It would not disrupt the Post Elementary School District.
3. It would involve less cost than the Michigan Avenue alignment.
4. Some of the land acquisition cost could be offset through the coordination of urban renewal and highway construction.

Disadvantages:

1. It would involve adverse driving distance.
2. Its cost would be higher than for the Cliff Street alignment.
3. It would cross main line railroad tracks twice and heavily traveled spur tracks once.
4. It would disrupt operation of the Paper Container Division of General Foods.
5. It would create severe traffic problems at the Kellogg plant.

MICHIGAN AVENUE ALIGNMENT

Advantages:

1. It would consist of existing state highway alignment, thereby subjecting no other areas to any adverse influences.
2. It would provide more direct service to General Foods than the Porter Street alignment.
3. It would provide more direct service to Kelloggs than the Cliff Street alignment.

Disadvantages:

1. Its cost would be higher than for the Cliff Street alignment.
2. It would disrupt the operation of the Paper Container Division of General Foods.
3. It would cross main line railroad tracks at two locations and spur tracks once.
4. It would bisect the Post Elementary School attendance area.

The first alignment is recommended for this section of I-94BL. The overriding disadvantage of the second and the third alternatives is the cost of constructing railroad separations over the New York Central railroad tracks. Both these alternative alignments would cross these tracks at two locations. Construction of these alignments would involve grade separations at these points. A further negative consideration is the damage the use of this alignment would do to the Paper Container Division's loading facilities at the west end of the plant. To connect these alignments to the Millpond interchange via Hall Street, I-94BL would have to pass between the west end of the Paper Container Division of General Foods plant and the main line tracks of the Grand Trunk Western Railroad. The interior operation of this plant is arranged for east-west movements, with materials entering from the west end loading area. An alignment passing between the Grand Trunk Western tracks

and this structure would necessitate rearrangement of the plant.

The City of Battle Creek recommends the Porter Street alternative for the eastern leg of the I/94 Business Loop. It is the city's contention that disturbances to the Cliff Street neighborhood and deficiencies of traffic service to the major industries in the area would be such as to outweigh the negative factors of the Porter Street alternative.

M-89/37

Regional highway studies being conducted by the Planning Division of the Michigan Department of State Highways indicate the desirability of establishing one new alignment to replace existing M-43 and M-37. To replace both routes, it would have to be located approximately midway between the existing alignments of M-43 and M-37, starting at Hastings and terminating at M-89. Traffic using M-43 between Hastings and Kalamazoo would use the new alignment, M-89 and the portion of existing M-43 between Kalamazoo and Richland. Traffic using M-37 between Hastings and Battle Creek would use the new alignment and enter the Battle Creek area on the M-89/96 axis; then turn south on a new route to make a connection with I-94 via I-94BL or continue into Battle Creek on I-94BL. The existing alignment of M-43, from M-37 west of Hastings to M-89, would be placed under jurisdiction of the county road commissions, as would existing M-37 from Hastings to Battle Creek. The function of M-96 has already been replaced by I-94 and it is being considered for deletion from the state highway system.

Three alternative alignments are considered for this route. The first would take M-89/37 south from Michigan Avenue, on 20th Street, to Dickman Road. The second would involve relocating M-89/37 southerly from a point where Michigan Avenue and Helmer Road extended northerly would intersect, and terminating the relocation at Dickman Road. Both these alignments would dual with I-94BL on Dickman Road, from Helmer Road or 20th Street east to the Millpond interchange.

The third M-89/37 alternative would complement a replacement for M-43 and M-37. This alternative would include a north-south connector between I-94BL and existing M-89, from the west end of Dickman Road in Fort Custer northwest to near the Kalamazoo-Calhoun County line.

Final determination of the location for M-89/37 will be made after thorough engineering studies of the three alternative locations have been completed. These engineering studies will include consideration of horizontal and vertical alignments, right-of-way widths, structures, costs, property acquisition, and other construction considerations.

The recommended system is compatible with Department of State Highways objectives and community development plans. The implementation of recommended highway projects would enable the area to place itself in a better competitive position with the nearby metropolitan areas of Kalamazoo, Grand Rapids, Lansing and Jackson. It would enhance the desirability of central Battle Creek as a place to work and shop. Recommended highway construction in the southern half of the area would effectively bring the core of the area (commerce and industry) closer to I-94 by reducing travel time and thereby expanding Battle Creek's area of influence.

This highway plan contains recommendations for adequate highway facilities to serve most of the existing industrial traffic generators. The recent connection of Dickman Road to I-94 on a new alignment west of Kellogg Airfield, adjacent to the Grand Trunk Western Railway, provides the Battle Creek area with good access to additional land having potential for industrial growth. Through traffic and traffic having destinations in the industrial corridor of the city are routed out of the central business district. This relieves congestion in the business area and enables Battle Creek to revise its downtown street system to suit its needs.

BATTLE CREEK AREA HIGHWAY SYSTEM

ALTERNATIVE IV (RECOMMENDED)

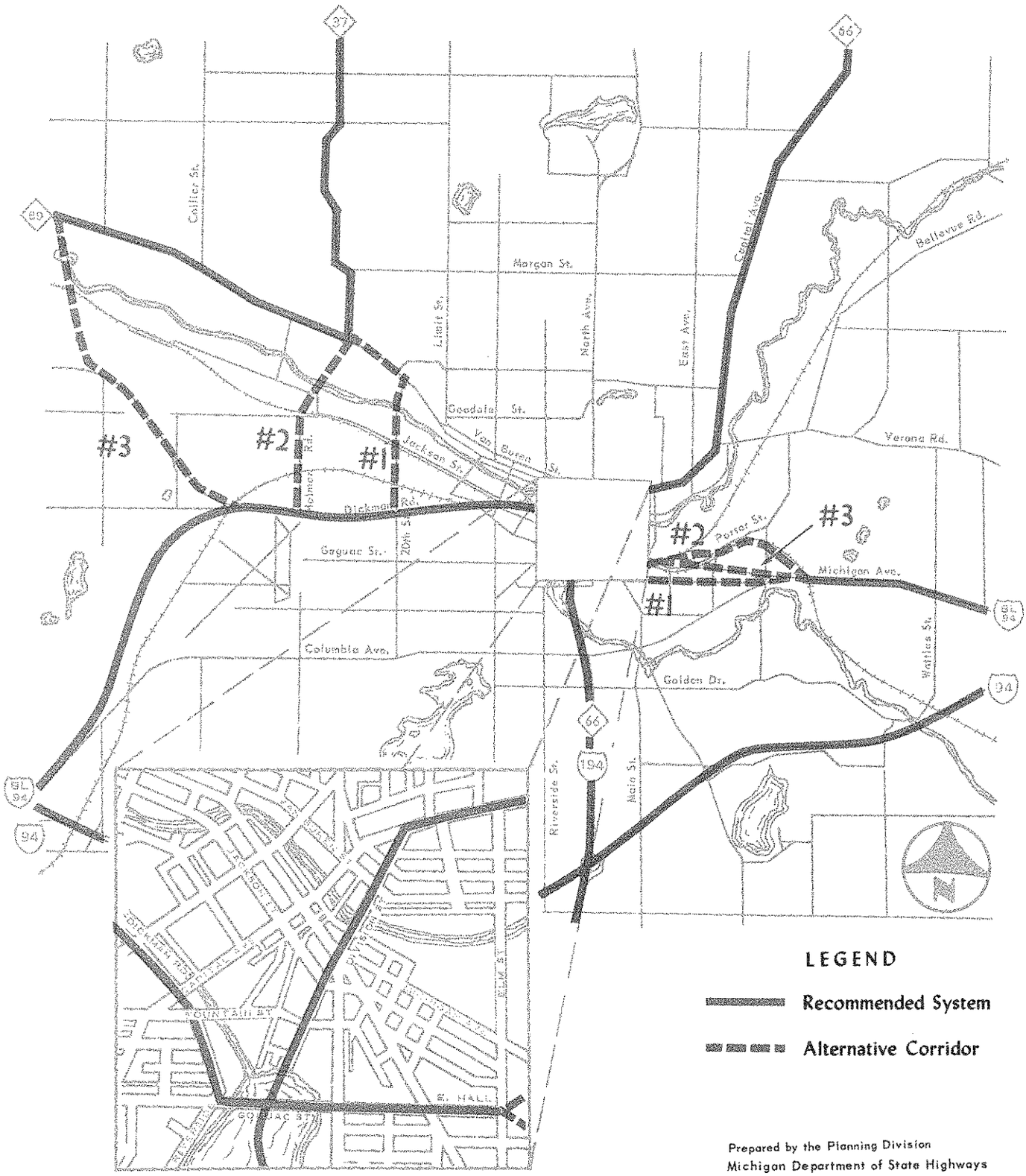


FIGURE 18

RECOMMENDED PROJECT STAGING

Stage I

Construction should be completed on I-194 from south of Columbia Avenue north through the Millpond to Fountain Street. Construction should also be completed on the portion of Dickman Road (I-94BL) from Capital Avenue to I-194 at the Millpond. Division Street, from Fountain Street to Capital Avenue (M-66), should be reconstructed to increase its traffic capacity. It would be advisable for the City of Battle Creek to realign Green Street, from Jackson Street to Jay Street, and improve Jay and State Streets to perform as the east end of a central business district circulator. This action is needed to insure the efficient functioning of Division Street as a state highway.

Stage II

The section of I-94 BL from the intersection of Michigan and Columbia Avenues, to I-194 at the Millpond, should be constructed as soon as agreement between the Department of State Highways and the City of Battle Creek can be reached.

Stage III

A north-south connector, between existing M-89 and I-94BL, should be constructed. Upon completion of the connector, the portion of M-89/37 from the connector east through the central business district should be deleted from the state highway system.

The programming of projects is arranged to permit a logical sequence of construction. Major construction projects taking longer to complete are scheduled for construction contract letting at earlier dates than projects involving only minor improvements. Facilities presently non-existent and necessary for the efficient functioning of the existing highway system, as well as for integrating into the final system, are also programmed early.

Recommendations in this report are made with the recognition that no community remains static. Changing conditions create new needs that require periodic review and restudy of recommendations with a view to making any necessary modifications. The need for continuing comprehensive transportation planning is evident and implicit in this study, and the periodic review of highway service to Battle Creek is recommended as changes in community structure warrant.

Supporting Documents

OFFICE MEMORANDUM

MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

June 1, 1966

To: R. S. Boatman, Director
Planning Division

From: H. H. Cooper, Director
Traffic Division

Subject: Traffic Division Critique of the
Battle Creek Area State Highway Plan

This is to supplement and update our letter of January 22, 1965, concerning our review of the subject State highway plan and to advise you that we generally consider the recommended Alternative System IV to be an adequate appraisal of trunkline needs of present and future traffic in the Battle Creek area.

Alternative 1 (Cliff Street) is the best location for I-94BL with respect to traffic operation and safety. Alternative 2 (Porter Street) and the present location of I-94BL on East Michigan Avenue do not afford the opportunity to provide the type of design and operation needed to fulfill traffic requirements in this corridor because of right-of-way and alignment limitations, railroad crossings and intersection location. They are therefore, from a traffic standpoint, completely unacceptable.

Alternative 3 for M-37, M-89 offers significant traffic advantages over Alternative 1 (20th Street) and Alternative 2 (Helmer Road). It would provide an excellent connection between I-94, I-94BL (Dickman Road), existing M-89 and the proposed relocation and consolidation of M-37 and M-43. Alternative 1 is entirely unacceptable from a traffic standpoint because of right-of-way limitations, steep grades, multiple railroad crossings and anticipated heavy left-turn movements which could possibly require extra right-of-way and special channelization. Although Alternative 2 would provide more of an opportunity to effect adequate traffic features than Alternative 1, it would not offer the advantages of Alternative 3.

The determination of the exact location and design of new facilities will, of course, be made at a later time. However, the recommended plan with Alternative 1 for I-94BL and Alternative 3 for M-37, M-89 should offer the opportunity to provide trunkline standards for design and operation and thereby serve the best interests of the motoring public and the citizens of the Battle Creek area.

H. H. Cooper, Director
Traffic Division

CITY OF BATTLE CREEK, MICHIGAN

49014

PLANNING COMMISSION — CITY HALL

WHEREAS, The City of Battle Creek has a "recognized" Planning Commission "duly constituted according to existing planning enabling legislation", which Planning Commission has been given the responsibility for the preparation of a Master Plan for the City; and

WHEREAS, The Planning Commission, in pursuance of this delegated responsibility, has caused to be made comprehensive studies of existing conditions and development trends and, on the basis of these studies, made estimates of the future development of the community, part or parts of which have been adopted as elements of a Master Plan of community development; and

WHEREAS, The Planning Division of the Office of Planning of the Michigan Department of State Highways has been delegated the responsibility of preparing, in cooperation with local planners, a highway plan, which plan represents the level of agreement that has been reached on long-range planning objectives; and

WHEREAS, The City Planning Commission and representatives of the Planning Division have cooperatively studied this problem and have prepared such a highway plan;

NOW THEREFORE BE IT RESOLVED, That the plan entitled, "Battle Creek State Highway Plan", as presented, is consistent and compatible with the planning and development objectives of the City of Battle Creek, with the exception of the final determination of alternative treatment for I-94 BL (eastern portion); and

NOW THEREFORE BE IT FURTHER RESOLVED, That the said highway plan as cooperatively developed and presented herewith be approved for presentation to the Michigan Department of State Highways for programming, except the aforementioned eastern portion of I-94 BL.

Dated: April 20, 1966

Richard J. Porter

Richard J. Porter, Chairman

City of Springfield

SPRINGFIELD, MICHIGAN

601 Avenue A • Battle Creek, Michigan 49015 • Area Code 616/965-2355

Office of
CITY CLERK

January 11, 1965

Resolution presented by Phillip Mallory and supported by Frank Kettumen of the City Planning Commission of the City of Springfield, Michigan:

WHEREAS: The City of Springfield has a "recognized" Planning Commission "duly constituted according to existing planning enabling legislation," which Planning Commission has been given the responsibility for the preparation of a Master Plan for the city, and;

WHEREAS: The Planning Commission, in pursuance of this delegated responsibility, has caused to be made comprehensive studies of existing conditions and development trends and, on the basis of these studies, made estimates of the future development of the community, part or parts of which have been adopted as elements of a Master Plan of community development, and;

WHEREAS: The Planning Division of the Office of Planning of the Michigan Department of State Highways has been delegated the responsibility of preparing, in cooperation with local planners, a highway plan, which plan represents the level of agreement that has been reached on long-range planning objectives, and;

WHEREAS: The City Planning Commission and representatives of the Planning Division have cooperatively studied this problem and have prepared such a highway plan, now:

THEREFORE BE IT RESOLVED: That the plan entitled, "Battle Creek State Highway Plan," as presented, is consistent and compatible with the planning and development objectives of the City of Springfield, except Alternative #1 (future M-96) which is not compatible, and

THEREFORE BE IT FURTHER RESOLVED: That the said highway plan as cooperatively developed and presented herewith be approved for presentation to the Michigan Department of State Highways for programming, except the aforementioned Alternative #1.

Ayes - All
Nays - None
Resolution Adopted

I, Carl H. Grasher, Clerk of the City of Springfield, Michigan, do hereby certify that this resolution was adopted by the Springfield Planning Commission on January 11, 1965, at its regular meeting for the month of January, 1965.

Signed Carl H. Grasher

Carl H. Grasher, City Clerk

Springfield - where you're a stranger only once.